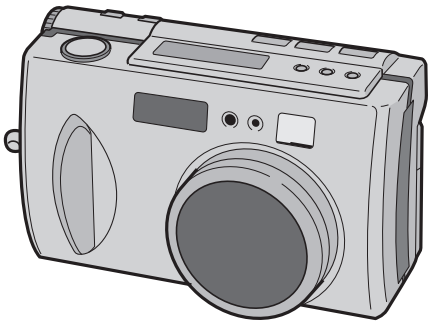
JVC

DIGITAL STILL CAMERA

GC-X1

ENGLISH



DSC
DIGITAL
STILL CAMERA

INSTRUCTIONS

LYT0544-001C

EN

Dear Customer,
Thank you for purchasing the Digital Still Camera. Before use, please read the safety information and precautions contained in the following pages to ensure safe use of your new camcorder.

Using This Instruction Manual
- All major sections and subsections are listed in the Table Of Contents (☞ pg. 8, 9).
- Notes appear after most subsections. Be sure to read these as well.
- Basic and advanced features/operation are separated for easier reference.

It is recommended that you . . .
.... refer to "CONTROLS, CONNECTORS AND INDICATORS" (☞ pg. 10 – 17) and familiarize yourself with button locations, etc. before use.
.... read thoroughly the Safety Precautions and Safety Instructions that follow. They contain extremely important information regarding the safe use of your new camcorder.

You are recommended to carefully read the cautions on pages 88, 89 before use.

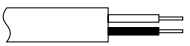
SAFETY PRECAUTIONS

IMPORTANT (For Customers in U.K.)

Connection to the mains supply in the United Kingdom.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted, and to replace the fuse cover.
If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.
If this product is not supplied fitted with a mains plug then follow the instructions given below:
DO NOT make any connection to the Larger Terminal coded E or Green.
The wires in the mains lead are coloured in accordance with the following code:



Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal coded N (Neutral) or coloured black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt — consult a competent electrician.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTIONS:
- To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.
- When you are not using the AC Power Adapter for a long period of time, it is recommended that you disconnect the power cord from AC outlet.

NOTES:
- *The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.*
- *The rating plate (serial number plate) of the AC Power Adapter is on its bottom.*

This camera is designed to be used with PAL-type colour television signals. It cannot be used for playback with a television of a different standard. However, shooting and LCD monitor playback are possible anywhere.

This unit is produced to comply with Standard IEC Publ. 65.

SOME DO'S AND DON'TS ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way — switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family knows how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of road safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

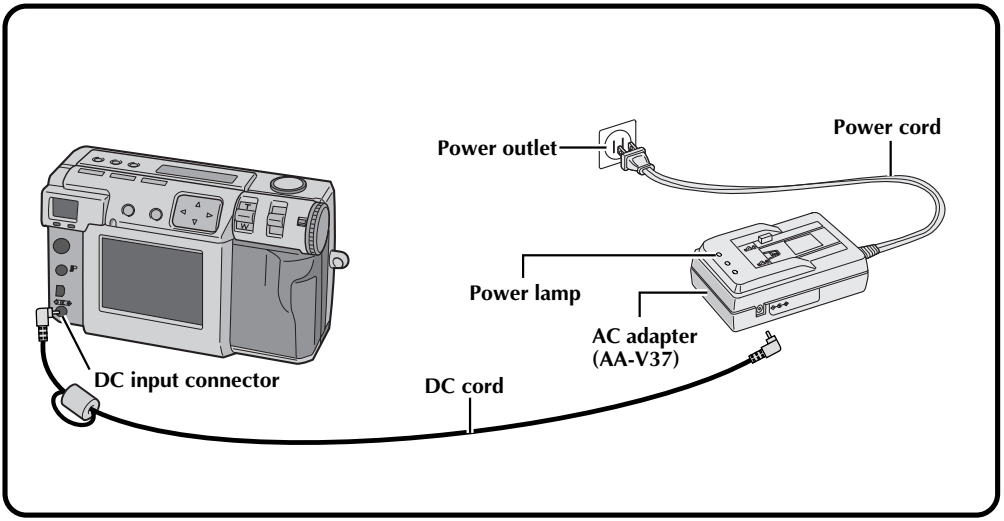
DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

— NEVER let anyone especially children push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock;

— NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!



Connect the Camera to a Power Outlet. (☞ pg. 20)

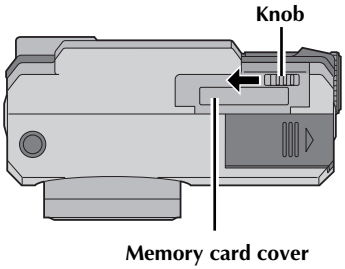
1 **Open the connector cover on the rear of the camera.**

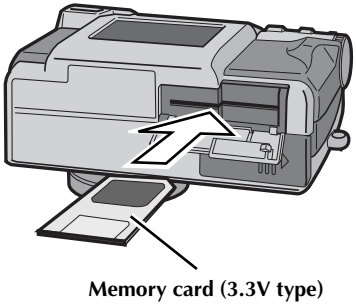
2 **Connect the DC cord to the DC input connector.**

3 **Connect the DC cord to the DC input connector on the AC adapter.**

4 **Connect the power cord to a power outlet.**

• The power lamp lights.





Insert the Memory card. (☞ pg. 22)

1 **Open the Memory card cover.**

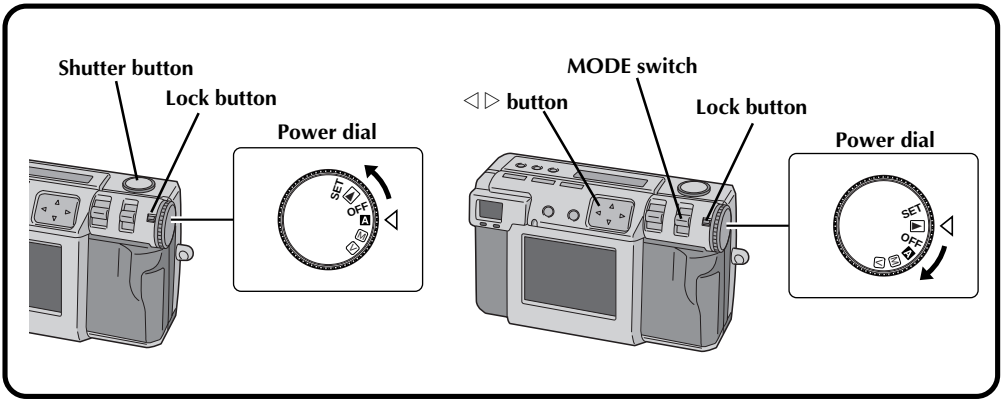
- Slide the knob to the open position.

2 **Insert the Memory card.**

- Insert the card so that the contact surface is facing up and the notch on the card is on the right.

3 **Close the Memory card cover.**

- Slide the knob to the close position.



Shoot a Picture. (☞ pg. 30)

1 **Turn the Power dial to "A" (full auto mode).**
- Hold the Lock button down while turning the Power dial.

2 **Point the lens at the subject and half-press the Shutter button.**
- Look through the finder.
- The focus is attained when the shoot standby lamp (green) changes from flashing to steadily on.

3 **Press the Shutter button all of the way to take the picture.**
- The picture image is stored in the Memory card.

Play back a Picture. (☞ pg. 31)

1 **Turn the Power dial to "▶".**
- Hold the Lock button down while turning the Power dial.

2 **Select "STILL PB" with the MODE switch.**

3 **Press the ◁ ▷ button to select the picture that you wish to view.**

Three high-quality still image shooting modes

1. 6M Pro-Still (Pixel Shift Mode) (☞ pg. 46)

This mode collects twice as much image data by using two exposures (with the CCD shifted one pixel for the second exposure), resulting in an image consisting of 6 million pixels, or twice as many in normal mode.

2. DR Pro-Still (Wide Range Mode) (☞ pg. 47)

This mode uses two exposures, one with the exposure adjusted for the dark portions of the image, and one with the exposure adjusted for the bright portions of the image. By using the image data from both exposures, it is possible to achieve a wide dynamic range that was previously impossible. This mode avoids pictures where part of the image is blacked out or whited out, which occurs easily with conventional digital cameras.

3. NR Pro-Still (Noise Reduction Mode) (☞ pg. 48)

This mode uses several exposures to collect a large amount of image information, then extracts the signal components and eliminates the noise components. This mode eliminates electronic noise, which occurs easily with conventional digital cameras.

Video Shooting

This feature is useful, if you want to send a short video by e-mail.

Collage shooting

This feature allows you to combine a subject with a previously photographed background with a simple operation.

Using the SmartMedia™ card* increases photo capacity

This unit is compatible with SmartMedia™ cards* (optional), which can be used to increase the number of pictures that can be taken.

* "SmartMedia™ card" (which is described as "Memory card" in this instruction manual) is a trademark of Toshiba Corporation.

Before taking important photos

- When you need to take an important photo, always take a test photo first and confirm that the camera is operating normally.
- Memory card is not installed when this unit is purchased. Be sure to install a Memory card before taking photos.
- Before shooting, always confirm how much memory is remaining from the memory card.
- We cannot bear any responsibility for an inability to shoot, record, or playback material normally in the event of a problem with a digital video camera, Memory card, etc.
- Store backups of important photos on a personal computer, etc. We cannot bear any responsibility for pictures stored in memory that are lost or altered.

Copyrights

You may only use material that you photograph or record with this digital camera for your own personal use, and not in any way that infringes on the copyrights of a third party. (Note that some performances and exhibits have restrictions against photography, even if only for your personal use.)

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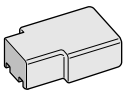
PROVIDED ACCESSORIES

Battery BN-V37



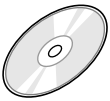
AC power adapter/ charger (AA-V37)

DC cable

USB cable

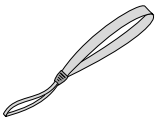
Video cable

CD-ROM



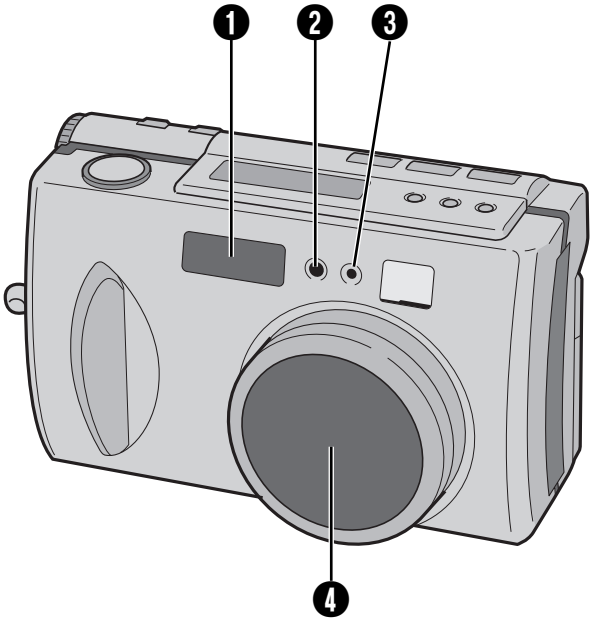
Memory card (3.3V type)

Hand strap

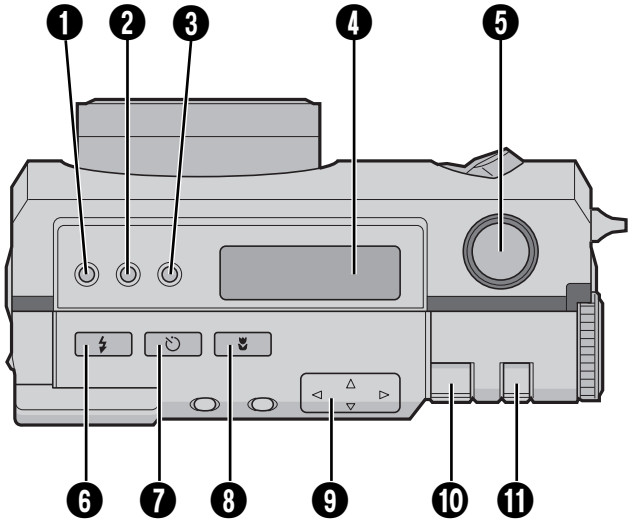


Lens cover

Front View



Top View



Front View

❶ **Flash** ..... ☞ pg. 33
Use the flash when shooting in dark conditions.

❷ **Flash sensor**
This sensor is needed for adjusting the brightness when using the flash.

❸ **Self timer lamp** ..... ☞ pg. 32
Blinks when the self timer is running.

❹ **Zoom lens** ..... ☞ pg. 30
Point the lens towards the subject when taking a picture. Because the lens is extremely vulnerable to damage from physical impacts, handle it very carefully. Striking or dropping the lens can damage the lens.

Top View

❶ **Exposure control button (+/–)** ..... ☞ pg. 37
Press this button to check the brightness setting and to change the brightness setting for shooting photos.

❷ **FOCUS button** ..... ☞ pg. 34
Press this button to check the current focus mode or to change the focus mode.

❸ **Iris button** ..... ☞ pg. 35
Press this button to check the current iris mode or to change the iris mode.

❹ **LCD panel** ..... ☞ pg. 14
Indicates the current mode through text and symbols.

❺ **Shutter button** ..... ☞ pg. 24
This button has two modes: press it half way to focus on the subject; press it all of the way to shoot a photo.

❻ **Flash button** ..... ☞ pg. 33
Press this button to change the flash mode.

❼ **Self timer button** ..... ☞ pg. 32
Press this button to change the time setting for the self timer.

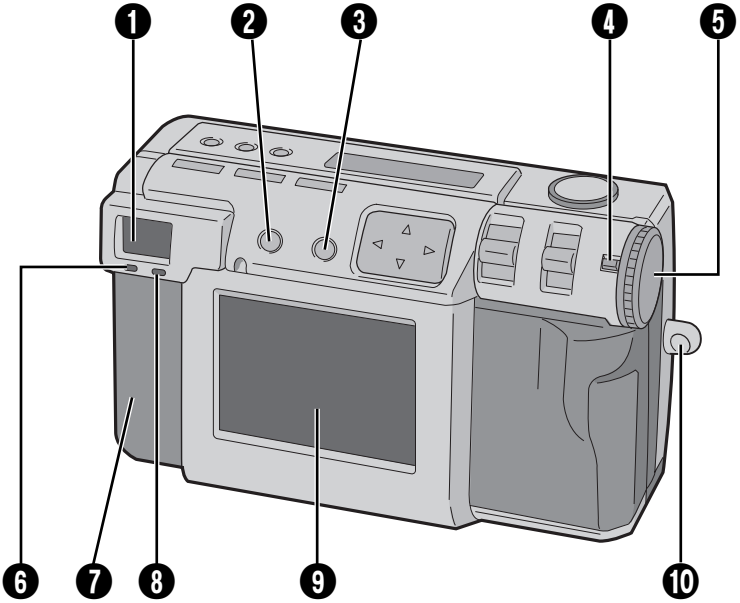
❽ **Macro button** ..... ☞ pg. 36
Press this button to set macro mode.

❾ **Directional button (△ ▽ ◁ ▷)** ..... ☞ pg. 23
Press this button to make various settings and selections.

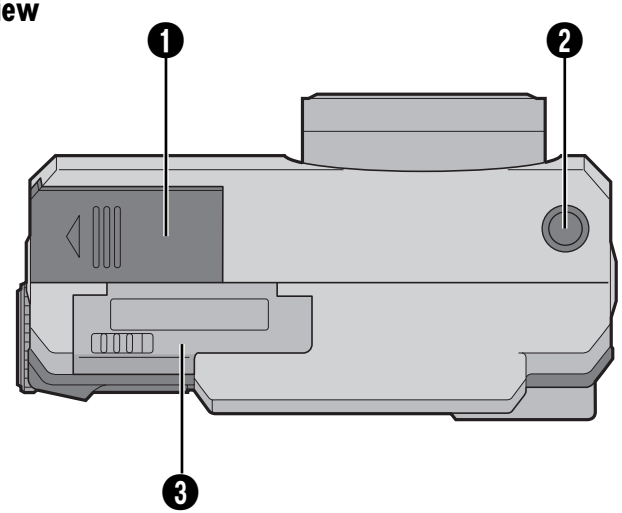
❿ **ZOOM lever** ..... ☞ pg. 27, 51
Use this for zoom shooting and to adjust the brightness of the LCD screen.

⓫ **MODE switch** ..... ☞ pg. 31, 36
Use this switch to change shooting and playback modes.

Rear View



Bottom View



Rear View

❶ **Viewfinder**
Look through here when framing and focusing your shot.

❷ **DISPLAY button** ..... ☞ pg. 31, 38
Press this button to turn the LCD screen on and off, and to select the menu display in camera mode and the index display in playback mode.

❸ **EXE (execute) button** ..... ☞ pg. 23, 50
This button is used to finalize selections on each menu, and also serves as a video playback button.

❹ **Lock button** ..... ☞ pg. 23
Hold down this button in order to turn the Power dial.

❺ **Power dial** ..... ☞ pg. 23
Hold down the Lock button and turn this dial to turn the power on and off and to change the mode of the camera.

❻ **Shoot standby lamp (green)** ..... ☞ pg. 30
The camera is ready to shoot a photo when this lamp changes from flashing to steadily on.

❼ **Connectors cover**
Refer to the "Connectors" on the right.

❽ **Flash standby lamp (red)** ..... ☞ pg. 33
The flash is ready when this lamp changes from flashing to steadily on.

❾ **LCD screen** ..... ☞ pg. 15
The photo subject/playback picture is displayed on this screen.

❿ **Hand strap/lens cover mount** ..... ☞ pg. 21
This is used to attach the hand strap or a lens cover.

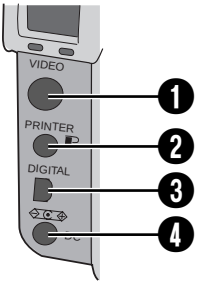
Bottom View

❶ **Battery cover** ..... ☞ pg. 19
Open this cover to replace the battery.

❷ **Tripod mount hole** ..... ☞ pg. 25
Use this hole to mount the camera on a tripod. Use a tripod that does not have a rotation stopper.

❸ **Memory card cover** ..... ☞ pg. 22
Open this cover to install/remove a Memory card.

Connectors



Pull the cover to open.

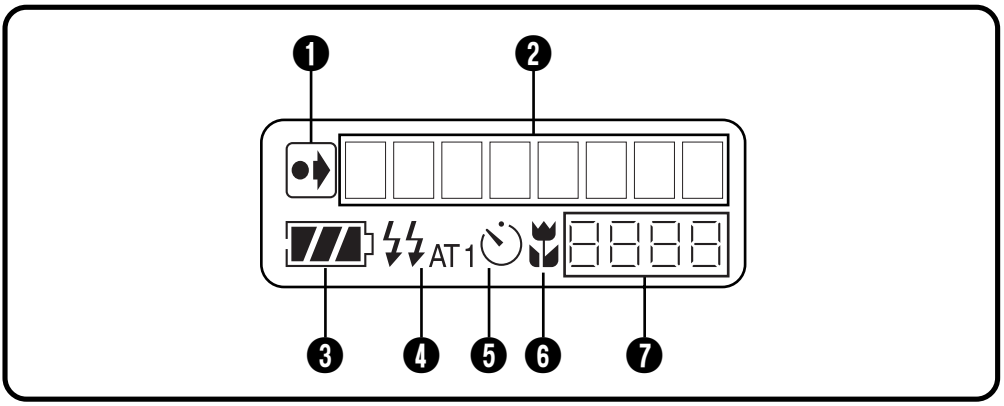
❶ **VIDEO output connector** ..... ☞ pg. 58
This is to connect to view picture on a TV.

❷ **PRINTER output connector** ..... ☞ pg. 59
This is to connect an optional printer (GV-SP2) to the camera via an optional cable.

❸ **DIGITAL output connector** ... ☞ pg. 68, 76
This is to connect the camera to a personal computer.

❹ **DC input connector** ..... ☞ pg. 20
Power from the provided AC adapter (AA-V37) is input here through a DC cord.

LCD Panel



❶ **Indicator of initial settings having been changed**
This indicator is displayed if the initial settings have been changed.

❷ **Mode display**
Displays the current mode.

❸ **Remaining battery power indicator**
This bar graph gives a rough indication of how much battery power is remaining.

❹ **Flash indicator** .....☞ pg. 33
This indicator is displayed if the flash button has been pressed and a mode that generates a flash (auto, forced on, or red-eye prevention) has been set.

❺ **Timer mode indicator** .....☞ pg. 32
This indicator is displayed if the Self timer button has been pressed and the timer mode has been set to either "1 second" or "8 seconds".

❻ **Macro mode indicator** .....☞ pg. 36
This indicator is displayed if the macro button has been pressed and the macro mode has been turned on.

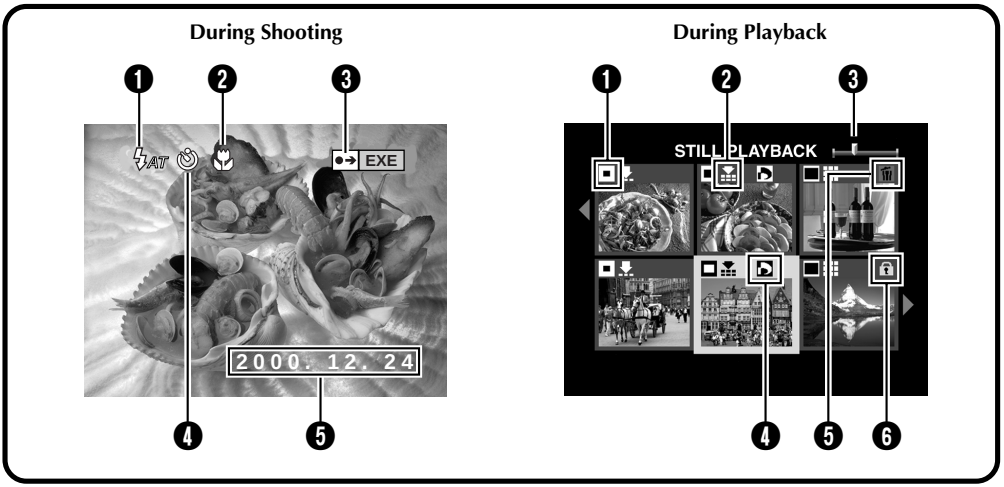
❼ **Remaining photos counter**
This indicates how many photos can still be taken.

Power Dial and Mode Display

The mode display appears on the LCD panel and screen, when the Power dial is set to certain position. Refer to the chart below for each mode. Press the DSP button to display the image, when the Power dial is set to "A", "M" or "V". Hold the Lock button down while turning the Power dial.

Power dial position	LCD panel	On-screen display	Page
SET	SET UP	Displays the SET UP menu	16
▶	STILL PB	Displays the playback image	31
OFF	—	—	—
A	CAM AUTO	Displays the image	30
M	MANUAL	Displays the image	34
V	VIDEO	Displays the image	49

On-screen Display



During Shooting

❶ **Flash indicator** ..... ☞ pg. 33
Appears when the flash button has been pressed and a mode that generates a flash (auto, forced on, or red-eye prevention) has been set.

❷ **Macro mode indicator** ..... ☞ pg. 36
Appears when the macro button has been pressed and the macro mode has been turned on.

❸ **Indicator of initial settings having been changed**
Appears when the initial settings have been changed. When the EXE button is pressed, the changed settings are displayed.

❹ **Timer mode indicator** ..... ☞ pg. 32
Appears when the Self timer button has been pressed and the timer mode has been set to either "1 second" or "8 seconds".

❺ **Date display** ..... ☞ pg. 66
Depending on the setting, there are three different types of date displays: Year/Month/Day, Month/Day/Year, and Day/Month/Year.

During Playback

❶ **Picture size indicator** ..... ☞ pg. 28
: 640 x 480
: 1024 x 768
: 2032 x 1536

❷ **Picture quality indicator** ..... ☞ pg. 29
: standard quality
: fine quality
: uncompressed quality

❸ **Image position indicator**
Indicates the current position of the displayed image in the memory.

❹ **indicator** ..... ☞ pg. 62
Appears for a picture for which DPOF was set.

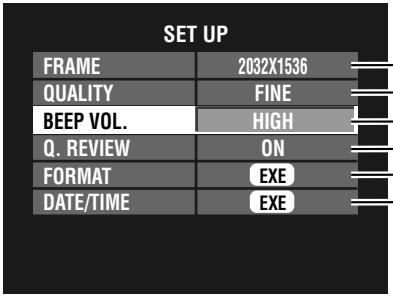
❺ **indicator** ..... ☞ pg. 53
Appears for a picture selected for deletion.

❻ **indicator** ..... ☞ pg. 52
Appears for a protected picture.

Menu Screens

SET UP Menu Screen

Turn the Power dial to "SET" to display the SET UP screen.

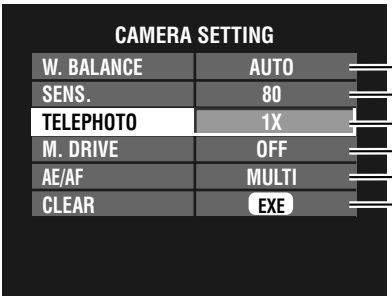


Refer to the following pages for a detailed description of operation.

- FRAME — ☞ pg. 28
- QUALITY — ☞ pg. 29
- BEEP VOL. — ☞ pg. 65
- Q. REVIEW — ☞ pg. 65
- FORMAT — ☞ pg. 23
- DATE/TIME — ☞ pg. 66

CAMERA SETTING Menu Screen

Turn the Power dial to "Ⓜ", then press the DSP button until the CAMERA SETTING screen appears. To turn off the menu screen, press the DSP button.

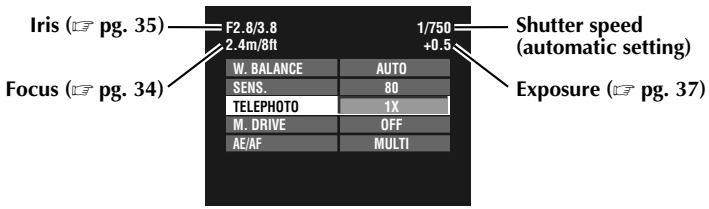


Refer to the following pages for a detailed description of operation.

- W. BALANCE — ☞ pg. 38
- SENS. — ☞ pg. 40
- TELEPHOTO — ☞ pg. 41
- M. DRIVE — ☞ pg. 42
- AE/AF — ☞ pg. 43
- CLEAR — ☞ pg. 44

CAMERA SETTING Confirmaton Screen

Turn the Power dial to "Ⓜ", then press the DSP button to turn on the LCD screen and hold down the EXE button. The CAMERA SETTING confirmation screen is displayed while the EXE button is held down. The confirmation screen will not appear when the LCD screen is turned on without on-screen display.



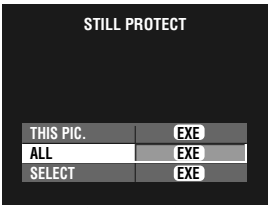
Playback Menu Screens

Turn the Power dial to "▶" (playback), and then select each mode with the MODE switch. The selected mode appears on the LCD screen.

STILL PLAYBACK

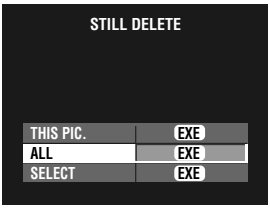
(☞ pg. 31)

STILL PROTECT



(☞ pg. 52)

STILL DELETE

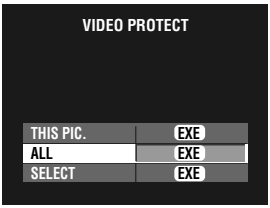


(☞ pg. 53)

VIDEO PLAY

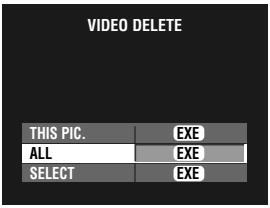
(☞ pg. 50)

VIDEO PROTECT



(☞ pg. 52)

VIDEO DELETE



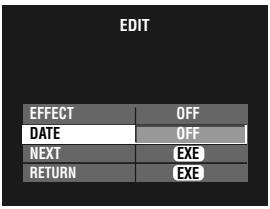
(☞ pg. 53)

USB MODE

No displays

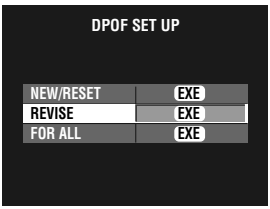
(☞ pg. 71, 78)

EDIT



(☞ pg. 54)

DPOF SET



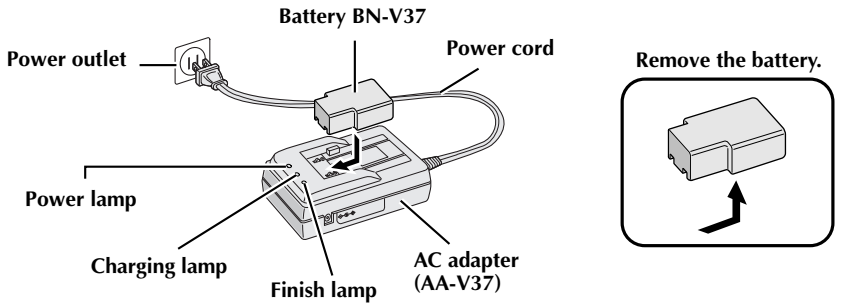
(☞ pg. 62)

NOTE:

- *It is not possible to change the settings on the menu screen when the item's letters appear gray.*

Charging the Battery

Charge the battery with the AC adapter (provided).



1 **Connect the AC adapter's power cord to a power outlet.**

- The "Power" lamp lights.

2 **Install the battery.**

- The "Charging" lamp lights.
- Charging is complete when the "Charging" lamp turns off and the "Finish" lamp lights.

3 **Remove the battery.**

Approximate number of pictures that can be taken with a fully charged battery (BN-V37)

Maximum number:
50 pictures
(when shooting every 30 seconds at normal temperature, with the flash, zooming, auto focus and the LCD screen turned on)

NOTE:

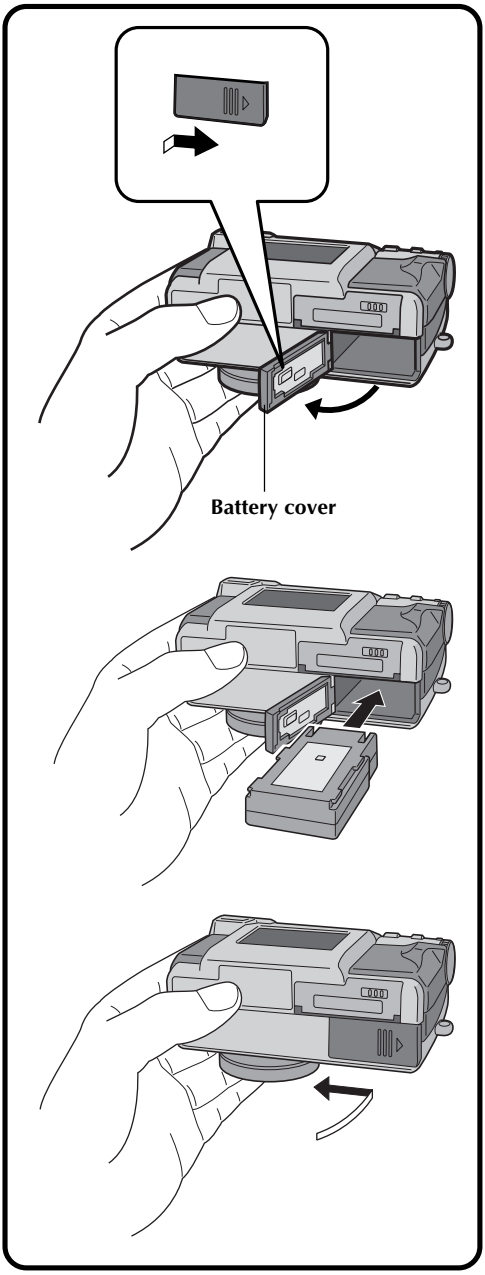
- *Depending on the settings of the flash, zooming, etc., the number of pictures that can be taken may decrease.*

NOTES:

- *Approximate charging time is 90 minutes for one battery (BN-V37). (at a temperature from 10°C to 35°C)*
- *Charging is not possible if the DC cord is connected to the AC adapter.*
- *The battery is no longer usable, if the shooting time is short with the battery fully charged. Replace the battery with new one.*
- *The Power dial can be turned to "ON" accidentally, when you put the camera in a bag, etc. If the camera is left turned on, the battery will be used up and you will not be able to shoot a photo. It is recommended to remove the battery from the camera when you carry the camera.*

Installing a Charged Battery

The battery (provided) is not charged when the camera is purchased. Be sure to charge the battery with the AC adapter before using the camera.



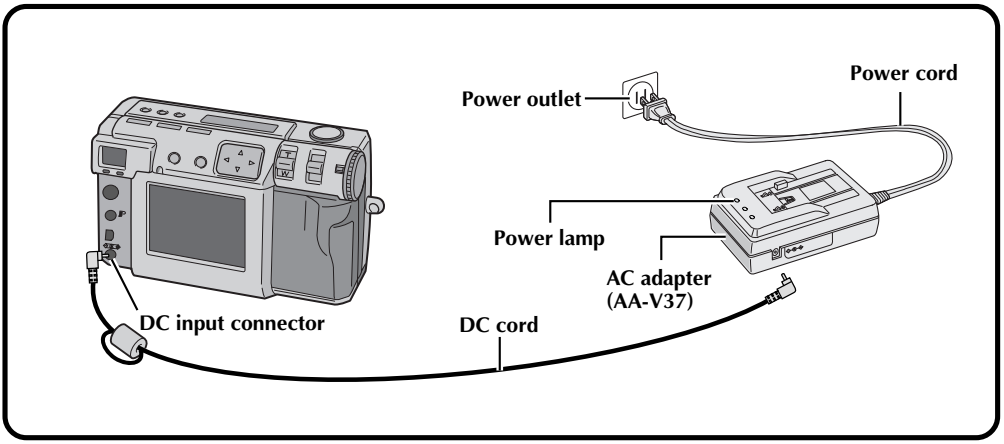
1. **Slide the battery cover slightly to open.**
2. **Insert a charged battery, making sure that it is oriented correctly.**
3. **Close the battery cover and slide it back.**

Removing the Battery

1. **Slide the battery cover slightly to open.**
2. **Remove the battery.**

Connecting the Camera to a Power Outlet

The AC adapter (provided) is useful when shooting photos indoors for an extended period of time. The adapter can also be used overseas if you use a conversion plug.



1 **Open the connector cover on the rear of the camera.**

2 **Connect the DC cord to the DC input connector.**

3 **Connect the DC cord to the DC input connector on the AC adapter.**

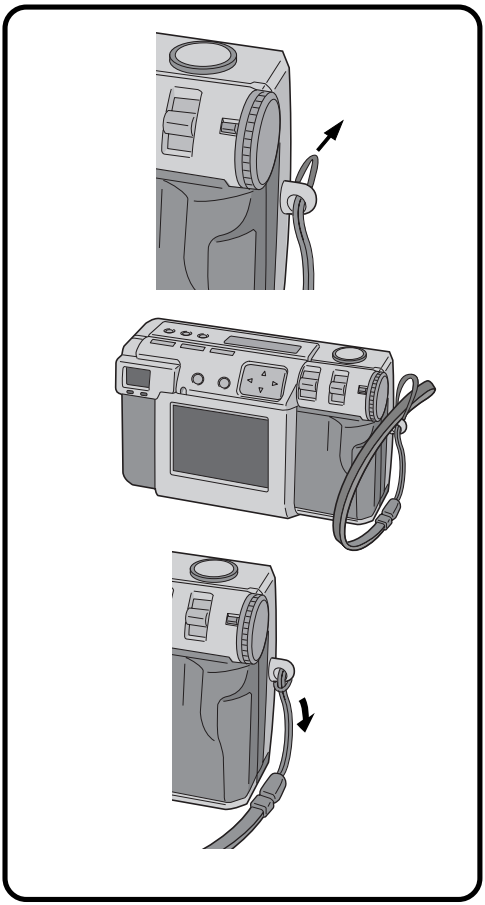
4 **Connect the power cord to a power outlet.**

• The power lamp lights.

NOTES:

- *Make sure to use the provided AC adapter (AA-V37).*
- *Do not attempt to use an AC adapter for a video camera or other electronic device with this camera. Differences in voltage levels can damage the camera.*
- *Use the AC adapter in order to safely format Memory cards, delete pictures or send pictures to a connected personal computer.*

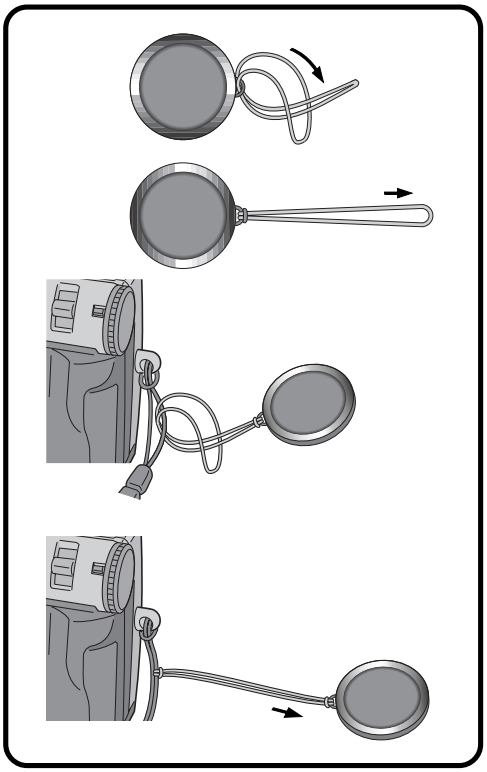
Attaching the Hand strap



1 Pass one end of the hand strap through the mounting hole.

2 Pass the other end through the loop.

Attaching the Lens Cover



1 Pass one end of the strap through the mounting hole on the lens cover.

2 Pass the other end through the loop.

3 Attach the strap of the lens cover to the hand strap.

NOTES:

- *Do not turn on the camera when the lens cover is attached. Doing so could result in the damage to the lens part.*
- *Make sure to attache the lens cover when the camera is not in use.*
- *Make sure to use the optional lens cleaning paper to clean fingerprints from the lens surface, and to clean the lens after shooting with the camera in warm, humid locations (by the seaside, in the mountains, etc.). Store the camera in a well-ventilated location with little dust or debris.*

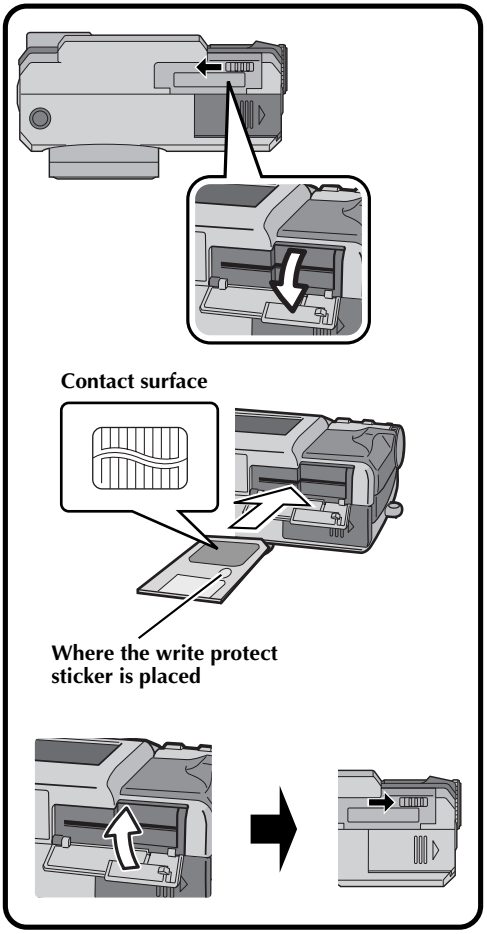
Inserting the Memory Card

Make sure to turn the Power dial to "OFF", when inserting a Memory card. Memory card is not loaded in the camera, when purchasing the camera.

1 **Open the Memory card cover.**
- Slide the knob and then pull the cover.

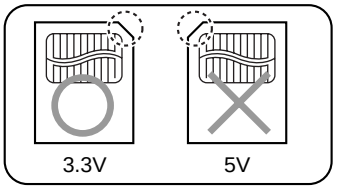
2 **Insert the Memory card.**
- Insert the card so that the contact surface is facing up and the notch on the card is on the right.
- Do not touch the contact surface on the card.

3 **Close the Memory card cover.**
- Slide the knob to lock the cover.



NOTES:

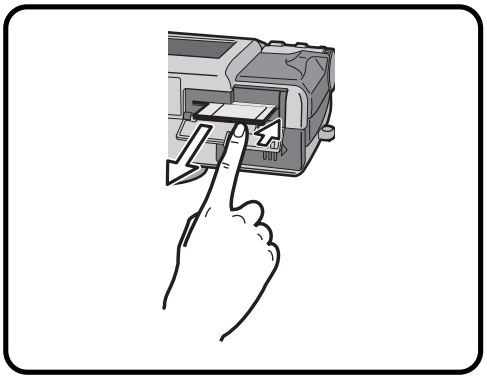
- *There are two types of Memory cards (the 3.3V type which is indicated by a notch on the right side, and the 5V type which is indicated by a notch on the left side). This camera uses only Memory cards (3.3V) with a notch on the right side.*
- *The maximum memory card capacity that can be used with this camera is 64MB.*
- *To avoid damage to the Memory card, do not drop or strike the Memory card against hard objects.*
- *To protect the entire content of the Memory card after shooting, peel and stick a write protect sticker as shown in the right.*



Removing the Memory Card

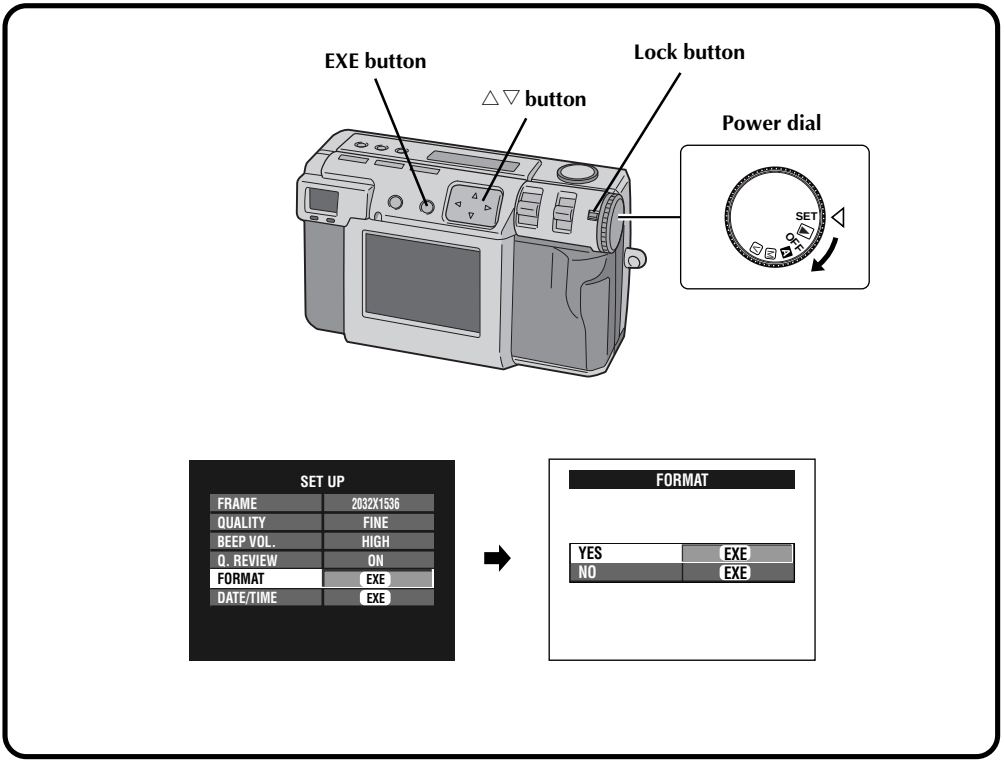
1 **Open the Memory card cover.**
- Slide the knob and then pull the cover.

2 **Remove the Memory card.**
- Push on the card to remove it.



Formatting a Memory Card

If your Memory card has not been formatted, it must be formatted before it can be used. When a Memory card is formatted, all pictures in the card will be lost.



Make sure to use the provided AC adapter (AA-V37) to power the camera, when formatting a Memory card. (☞ pg. 20)

1 **When the message "FORMAT MEMORY CARD" appears, turn the Power dial to "SET".**

- Hold the Lock button down while turning the Power dial.
- The SET UP screen appears.

2 **Press the △▽ button to select "FORMAT".**

3 **Press the EXE button.**

- The FORMAT screen appears.

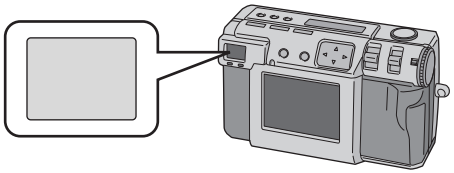
4 **Press the △▽ button to select "YES".**

5 **Press the EXE button.**

- "NOW FORMATTING" appears.
- Do not turn off the power or perform any other operations while formatting is in progress.
- The formatting starts, and the contents of memory are erased. When formatting is completed, the SET UP screen appears.

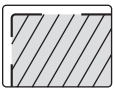
Viewfinder

This camera is equipped with an optical viewfinder.



Normal Shooting
To focus, point the camera so that the subject appears within the finder, and then press the shutter button.

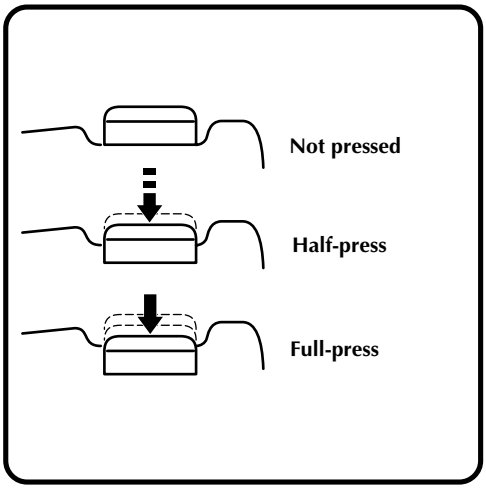
Macro Shooting
When shooting close-up, make sure the subject being photographed is within the frame inside the finder (indicated with diagonal lines).



NOTES:

- *In close-up (macro) shooting, the area that is actually photographed will be slightly below the area that can be seen in the viewfinder. The closer the camera is the subject, the greater that this displacement is.*
- *It is recommended to view the subject with the LCD screen for an important shooting.*

Shutter Button



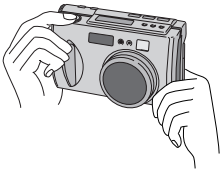
The camera's Shutter button is a two-step button. Pressing it halfway (to the first step) causes the photo standby lamp (green) to flash while the camera focuses automatically.
Once the camera is focused, the photo standby lamp (green) lights steadily. Pressing the Shutter button halfway (to the first step) is called a "half-press." Pressing the button from the half-press position to the full-press position causes the camera to take a picture.

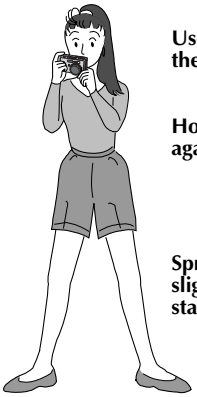
NOTES:

- *Suddenly pressing the Shutter button with your finger or pressing too strongly can result in a picture that is at an angle or which is blurry. Press the button smoothly from the half-press position to the full-press position when taking pictures.*
- *If you have pressed the Shutter button halfway and then release it, the camera will perform the autofocus operation again the next time that you press the Shutter button halfway.*
- *If you press the Shutter button all the way instead of halfway, a picture can be taken after focusing automatically.*

Good Photography Posture

With your left hand firmly supporting the camera to the left of and below the lens, support the camera body with your right hand.
Next, look for your subject and determine the camera position.
You can change the angle of the subject and the background by changing the direction in which you point the camera.
You then frame the shot by using the zoom function, etc., to enlarge or reduce the subject to the desired size within the shot.





Use your left hand to hold the camera also.

Hold your arms firmly against your body.

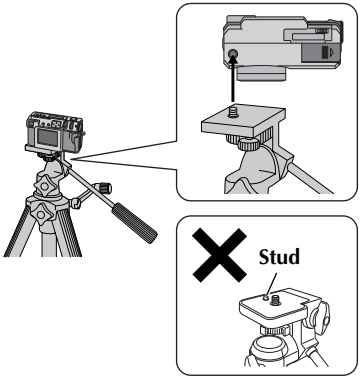
Spread your legs apart slightly and adopt a firm stance.

Mounting the Camera on a Tripod

1 **Align the screw hole on the bottom of the camera with the screw on the tripod.**

2 **Turn the screw on the tripod to secure the camera in place.**

- Adjust the screw and the length of the legs so that the camera does not wobble at all.



NOTE:

- *Use only tripods not equipped with a stud that prevents the camera from rotating.*

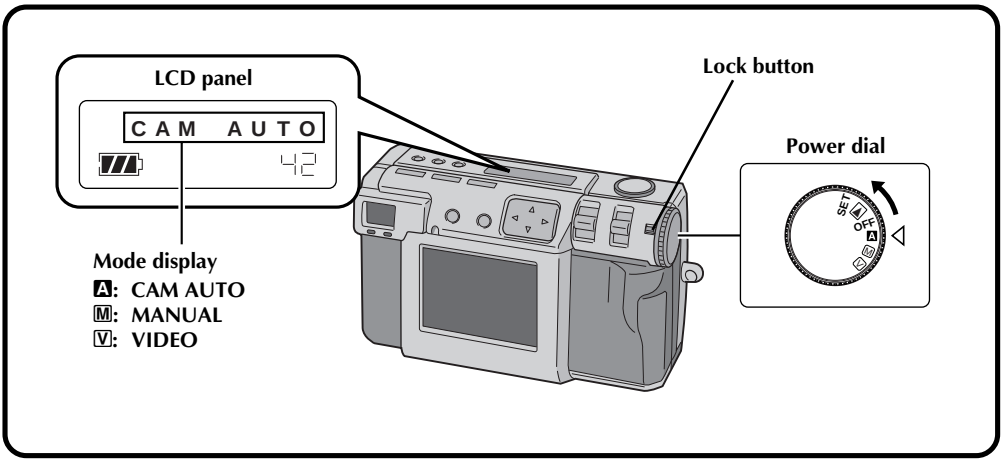
Using a Tripod

We recommend use of a tripod in the circumstances described below in order to avoid problems caused by shaky hands.
We especially recommend the use of a tripod when using pixel shift mode, wide range mode, or noise reduction mode.

- **Low shots**
  Because it is difficult to assume a steady posture for a low shot, the shot will frequently be on a slant or blurred by shaky hands.
- **Dark locations**
  When shooting in a location that prohibits the use of a flash (such as in a museum), the shutter speed is reduced, which increases the likelihood of problems caused by shaky hands.
- **Shooting a distant object through the telephoto feature**
  Because the telephoto feature makes a small, distant space appear larger, even the slightest movement of the camera can cause blurring.
- **Shooting an extreme closeup**
  Because a nearby object appears very large when shot in a closeup, the slightest movement in your body or hand can result in a blurred image.

Selecting the Shooting Mode

The Power dial is used to switch among three shooting modes: "A", "M" and "V".



1 **Select the shooting mode with the Power dial.**

- Hold the Lock button down while turning the Power dial.

Turn the Power dial to one of the following modes, depending on your needs:

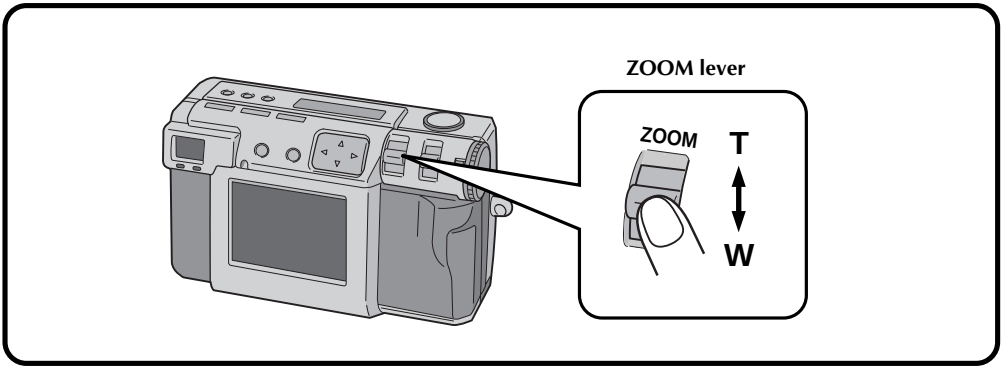
"A": To shoot photos in full auto mode
In this mode, the camera automatically sets the brightness, the shutter speed, the focus, and the white balance.

"M": To shoot photos in manual mode
In this mode, you can set the brightness, the shutter speed, the focus, and the white balance manually.

"V": To shoot video
You can shoot up to 20 seconds of video with a screen size of 160 x 120. This feature is useful if you want to send a short video by e-mail.

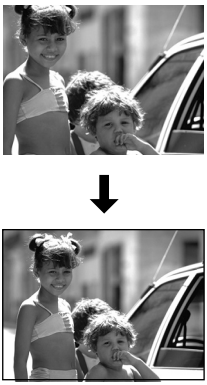
Zoom Shooting

The camera incorporates a 2.3X zooming function that corresponds to a 37 mm to 86 mm lens of a 35 mm camera. Zooming allows you to shoot wide areas, as well as close-ups of subjects located far away, without changing the shooting position. Turn the Power dial to "A", "M" or "V" when shooting with the zoom function.



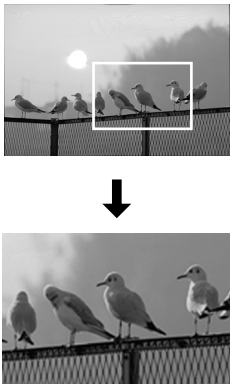
Set ZOOM lever to "W" (wide angle).

You can shoot a wider angle.



Set ZOOM lever to "T" (telephoto).

You can shoot a distant subject in closeup.

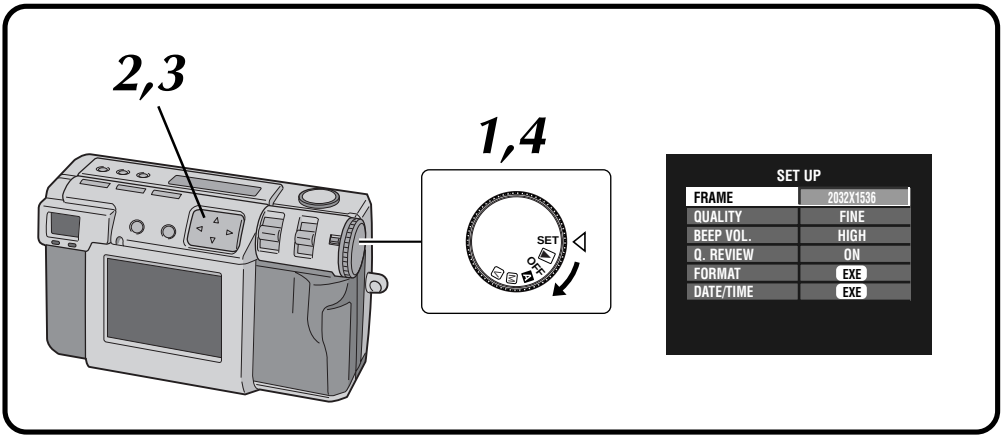


NOTE:

- *With this camera, you can set the "AF" (autofocus)/"AE" (auto exposure) sensor point to either "SPOT" or "MULTI". Switch to "SPOT" if the camera focuses on the background when you zoom in for a closeup.* *(☞ pg. 43)*

Selecting the Picture Size

There are three picture sizes, starting with the highest resolution:
2032 x 1536 (QXGA)
1024 x 768 (XGA)
640 x 480 (VGA)
Select the resolution that best fits your needs.



1 **Turn the Power dial to "SET".**
- Hold the Lock button down while turning the Power dial.
- The SET UP screen appears.

2 **Press the △ ▽ button to select "FRAME".**

3 **Press the ◁ ▷ button to select either 2032 x 1536, 1024 x 768, or 640 x 480.**
- The frame size is set.
- Turn the Power dial for shooting or other operations.

4 **Turn the Power dial to "A" or "M" for shooting.**

Approximate number of pictures that can be stored (when using 8MB/16MB Memory card):

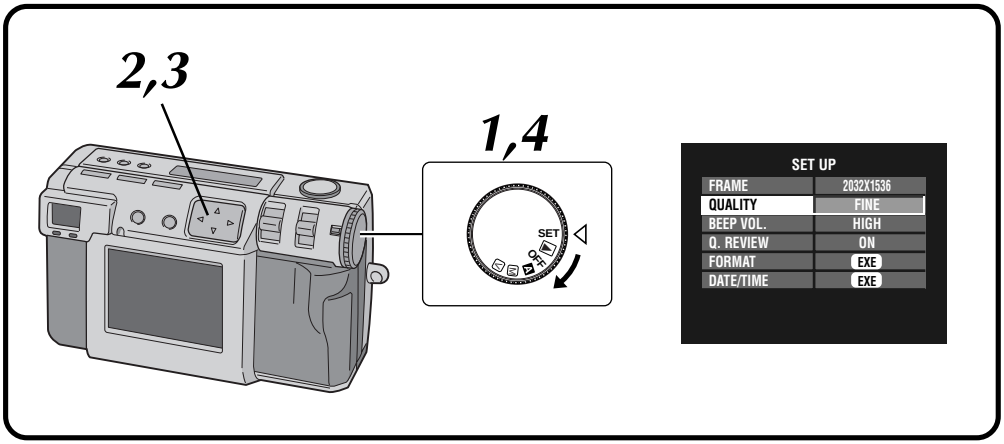
FRAME	QUALITY	8MB	16MB
2032 x 1536	NO COMP.	–	1
	FINE	8	16
	STANDARD	10	20
1024 x 768	NO COMP.	3	6
	FINE	32	64
	STANDARD	43	86
640 x 480	NO COMP.	8	16
	FINE	65	130
	STANDARD	87	174

NOTE:

- *The number of pictures that can be stored varies depending on the shooting condition.*

Selecting the Picture Quality

You can select the picture quality according to the purpose for which you want to use the picture.
There are three levels of picture quality, starting from the highest quality:
NO COMP. (uncompressed)
FINE (fine)
STANDARD (standard)



1 **Turn the Power dial to "SET".**
- Hold the Lock button down while turning the Power dial.
- The SET UP screen appears.

2 **Press the △▽ button to select "QUALITY".**

3 **Press the ◁▷ button to select either "FINE", "STANDARD", or "NO COMP." mode.**
- The new picture quality mode is set.
- Turn the Power dial for shooting or other operations.

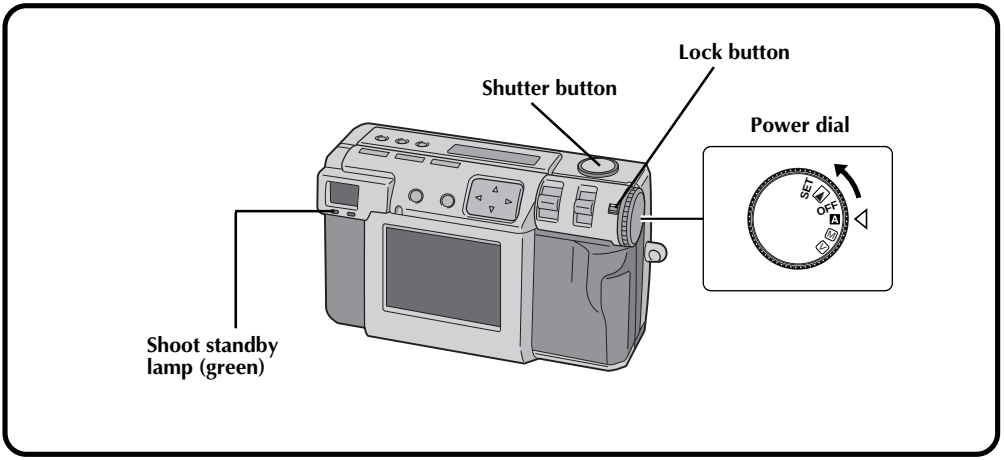
4 **Turn the Power dial to "A" or "M" for shooting.**

NOTE:

- *The number of pictures that can be stored will vary according to the images that are shot, the conditions under which the camera was used, the temperature when used, and the batteries that were used.*

Full Auto Shooting

This mode allows you to take photos with little effort, since the camera automatically adjusts the focus, the shutter speed, the brightness and the white balance.



1 **Turn the Power dial to "A".**

- Hold the Lock button down while turning the Power dial.
- The camera turns on in full auto mode.

2 **Point the lens at the subject and half-press the Shutter button.**

- Look through the finder.
- The camera will automatically focus on the subject while the shutter button is half-pressed.
- The shoot standby lamp (green) flashes. Once focus is attained, the lamp changes from flashing to on.
- To display the image on the LCD screen while shooting, press the DSP button.

3 **Press the Shutter button all the way to take the picture.**

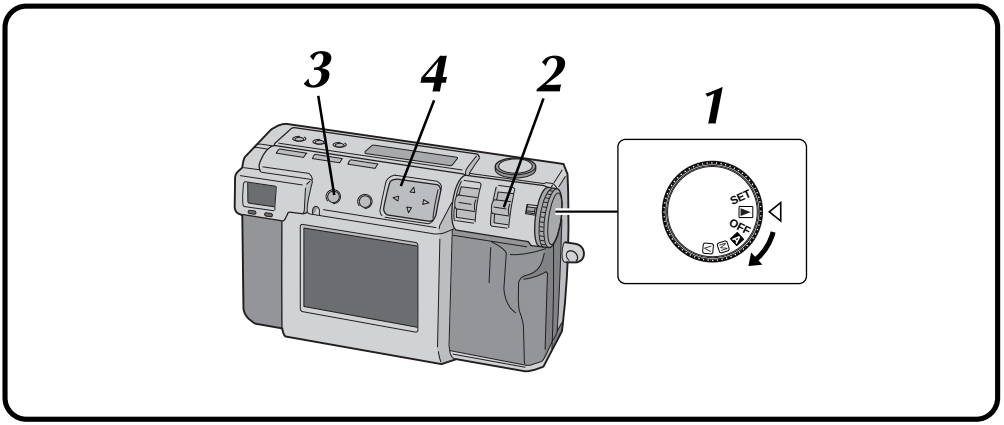
- The picture image is stored in the Memory card.
- The shoot standby lamp (green) goes off when the recording has finished.

NOTES:

- *The image on the LCD screen becomes still while the shoot standby lamp (green) flashes.*
- *It takes a little while to store the picture in the Memory card.*

Playing Back Still Pictures

Each picture that you shoot is numbered and saved.
You can then view these saved pictures in sequence, one by one.



Normal Playback

1 **Turn the Power dial to "▶".**
- Hold the Lock button down while turning the Power dial.

2 **Select "STILL PB" with the MODE switch.**
- "STILL PB" appears on the LCD panel.

3 **Press the DSP button to select the display mode.**

4 **Press the ◁ ▷ button to select the picture that you wish to view.**

NOTES:

- *To change the display mode during playback, press the **DSP** button.*
  *Press the **DSP** button repeatedly to cycle through the following modes:*
  - ***Full size screen (with on-screen display)***
  - ***Full size screen (without on-screen display)***
  - ***6 indexed picture screen***
- *Playback is not possible if the picture has been processed by a personal computer, other models of camera, etc. or the picture size is other than 2032 x 1536, 1024 x 768 or 640 x 480.*
- *It takes a little while to display the photographed image on the LCD screen if a lot of images are recorded on the Memory card.*

Auto Playback

1 **Turn the Power dial to "▶".**
- Hold the Lock button down while turning the Power dial.

2 **Select "STILL PB" with the MODE switch.**
- "STILL PB" appears on the LCD panel.

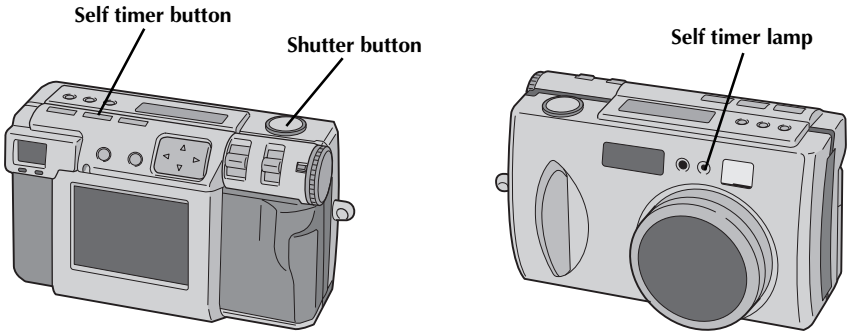
3 **Press the DSP button to select the display mode.**

4 **Press and hold the ◁ ▷ button for more than 2 seconds.**
"▷": Displays pictures in order.
"◁": Displays pictures in reverse order.

5 **Press the ◁ ▷ button again to stop Auto Playback.**

Self Timer

The self timer clicks the shutter automatically after either 1 second or 8 seconds after the timer has been set. Use the self timer to take your own picture, or if you are worried that you will shake the camera too much when you press the Shutter button. Turn the Power dial to "A", "M" or "V" when using the Self timer.



1 Press the Self timer button and set the time.

- Press the Self timer button repeatedly to cycle through the following settings:
  Off → 8 seconds → 1 second → Off
- The "⏲" (8 seconds) or "1⏲" (1 second) mark appears on the LCD panel.

2 Point the lens at the subject and half-press the Shutter button.

- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.
- To display the image on the LCD screen while shooting, press the DSP button.

3 Press the Shutter button all the way to take the picture.

- The self timer lamp and the "⏲" on the LCD panel will begin to flash.
  The shutter will click after either 1 second or 8 seconds.

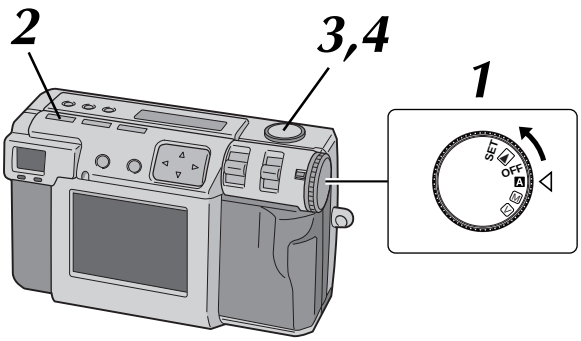
NOTES:

- *When there is less than three seconds remaining until the shutter clicks for 8 seconds self timer, the self timer lamp will begin to flash rapidly.*
- *To cancel the self timer before it runs out, press the Self timer button again.*
- *Focusing occurs when the Shutter button is half-pressed.*

Flash Shooting

There are four flash modes:

Auto : This setting automatically flashes when shooting under dark conditions.
Forced on : Select this setting to force the flash.
Red-eye prevention : Select this setting to minimize the "red-eye" effect that occurs when using the flash. The flash is forced to light.
Off : Select this setting to disable the flash even when shooting under dark conditions. Note that in order to prevent blurry photos a tripod should be used with this setting, since the shutter speed is slower.



1 **Turn the Power dial to "A" or "M".**

- Hold the Lock button down while turning the Power dial.

2 **Press the Flash button and select the flash mode.**

- The "$\lightning_{AT}$" indicator appears on the LCD panel.
- Press the Flash button repeatedly to cycle through the following modes: "Off" → "$\lightning_{AT}$ (auto)" → "$\lightning$ (forced on)" → "$\lightning\lightning$ (red-eye prevention)" → "Off"
- If the mode is set to any mode other than "Off", charging starts and the flash standby lamp (red) flashes. When the flash standby lamp remains lit steadily, charging is complete.

3 **Point the lens at the subject and half-press the Shutter button.**

4 **Press the Shutter button all the way to take the picture.**

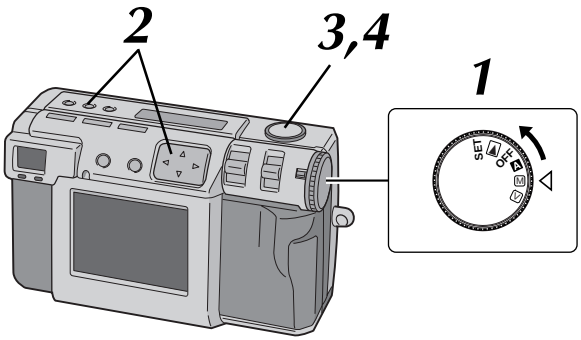
- The flash lights and the flash standby lamp (red) begins flashing.
- In red-eye prevention mode, the flash lights twice. The first flash is designed to reduce the red-eye effect. The second flash is when the picture is actually taken.

NOTES:

- *Though the image on the LCD screen may appear dark, there is no problem with the recorded image.*
- *When the flash is turned on, the iris value is set to F2.8/3.8 automatically.*
- *When shooting with the flash, it is not possible to set the iris and exposure manually.*
- *Do not press the Shutter button while the flash is being charged.*

Manual Focus

You can focus to the subject manually.



1 **Turn the Power dial to "Ⓜ".**

- Hold the Lock button down while turning the Power dial.

2 **Press the FOCUS button, and then press the ◁ ▷ button within two seconds.**

- Press the ◁ ▷ button repeatedly to cycle through the following modes:

AF-S (Auto Focus-Single):
When the Shutter button is half-pressed, focus is automaticaly set once.

MF (Manual Focus):
You can focus to the subject manually.
Press the △ ▽ button to focus.
Press the △ button to lengthen the focal distance.
Press the ▽ button to reduce the focal distance.

2.4m/8ft:
Sets the focus to this distance.

∞:
Sets the focus to infinity.

AF-C (Auto Focus-Continuous):
While the Shutter button is half-pressed, the camera will continue to focus on the subject automatically.

3 **Point the lens at the subject and half-press the Shutter button.**

- To display the image on the LCD screen while shooting, press the DSP button.

4 **Press the Shutter button all the way to take the picture.**

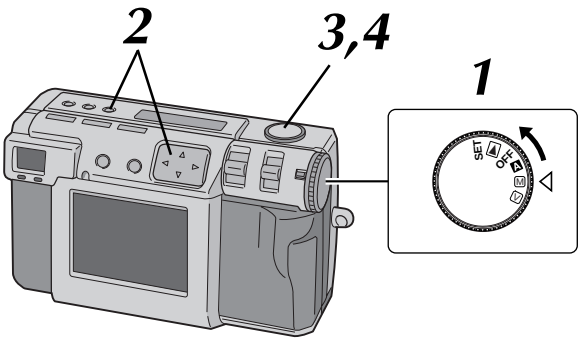
NOTES:

Focus manually in the following circumstances:

- *When shooting a low-contrast subject, such as a flat wall or a blue sky.*
- *When there is an obstacle such as a wire fence between a subject and the camera.*
- *When shooting a subject that has a very fine pattern, or a perfectly regular pattern.*
- *When shooting a subject under flickering illumination, including fluorescent light, or when dark.*

Iris Setting

You can adjust the depth of field and the shutter speed by setting the F value manually.



1 **Turn the Power dial to "Ⓜ".**

- Hold the Lock button down while turning the Power dial.

2 **Press the Iris button, and then press the ◁ ▷ button within two seconds.**

- Press the ◁ ▷ button repeatedly to cycle through the following modes:
  PROGRAM → F2.8/3.8 → F5.6 → F8 → F11 → PROGRAM
- The F value is the iris value, which controls the amount of light that reaches the camera's image sensor.
- Smaller the F value is, faster the shutter speed becomes. Larger the F value is, slower the shutter speed becomes.
- Larger the F value is, deeper the depth of field becomes.
- In PROGRAM mode, the iris value and the shutter speed are calculated and set automatically by the camera.

3 **Point the lens at the subject and half-press the Shutter button.**

- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.
- To display the image on the LCD screen while shooting, press the DSP button.

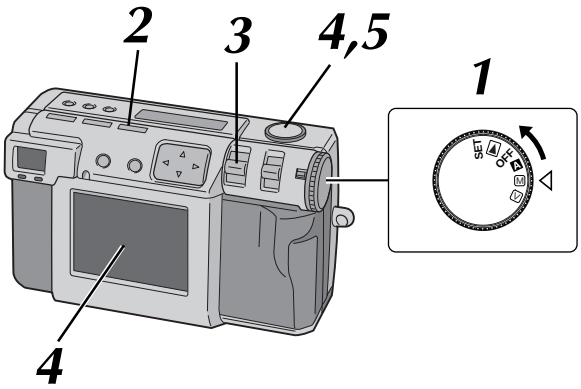
4 **Press the Shutter button all the way to take the picture.**

NOTE:

- *When shooting a night scene, select "☽" for "W. BALANCE". (☞ pg. 38)*

Macro Shooting

Use Macro mode to shoot a subject at a distance of 2 to 50 cm. This mode is appropriate for a close-up shot of insects and plants outdoor.



1 **Turn the Power dial to "A", "M" or "V".**
- Hold the Lock button down while turning the Power dial.

2 **Press the Macro button.**
- "" is displayed on the LCD panel.
- The zooming is set to the widest angle automatically.
- The subject is displayed on the LCD screen.
- To turn off the Macro mode, press the Macro button again.

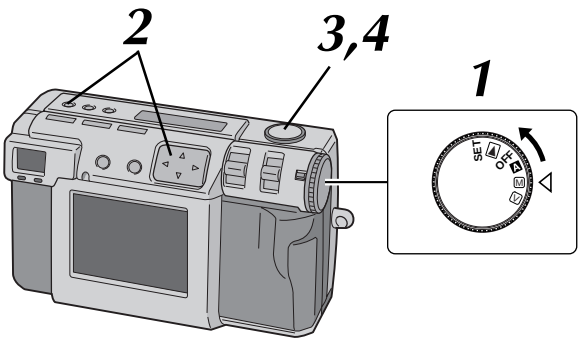
3 **Use the ZOOM lever to adjust the size of the subject.**

4 **Point the lens at the subject and half-press the Shutter button.**
- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.

5 **Press the Shutter button all the way to take the picture.**

Exposure Control

If the subject is predominantly white, black, red, etc., the resulting picture may be underexposed (too dark). In such a case, it is necessary to use the exposure control to restore the picture to a more realistic image. With this camera, you can make this adjustment by up to +/–2 iris steps in units of 0.5EV (exposure value).



(–2EV)

(+2EV)

1 **Turn the Power dial to "Ⓜ"or "Ⓥ".**

- Hold the Lock button down while turning the Power dial.

2 **Press the Exposure control button (+/–), and then press the ◁ ▷ button within 3 seconds.**

- Press the ▷ button to cycle through the following modes:
  –2 → –1.5 → –1.0 → –0.5 → 0 → +0.5 → +1.0 → +1.5 → +2.0
  (Darker to brighter)
- Press the ◁ button to cycle through the modes in the opposite direction.

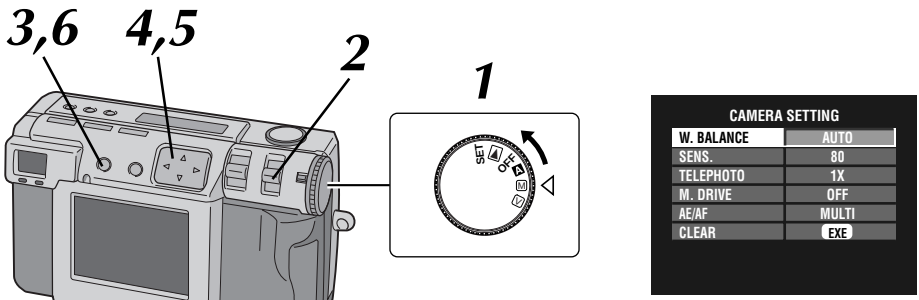
3 **Point the lens at the subject and half-press the Shutter button.**

- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.
- To display the image on the LCD screen while shooting, press the DSP button.

4 **Press the Shutter button all the way to take the picture.**

White Balance Adjustment

The white balance adjustment needs to be made when a picture is greenish, or when there is blue or red ghosting around an image. If there are no problems with the colors in a picture, select "AUTO".



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "MANUAL" with the MODE switch.**
- "MANUAL" appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

4 **Press the △ ▽ button to select "W. BALANCE".**

5 **Press the ◁ ▷ button to select from among "AUTO", "☀", "⛅", "☀", "MWB" or "★".**
- Select the preset that produces the best color for the subject that you wish to photograph.

AUTO: Adjusts the white balance automatically.
☀: Select this option when shooting outside on a sunny day.
⛅: Select this option when shooting outside on a cloudy day.
☀: Select this option when shooting with video lights, etc.
MWB: Select this opotion to photograph a subject with a white balance that was preset for that subject. (☞ pg. 39)
★: Select this opotion when shooting a night scene. The shutter speed is automatically set to 1/750 seconds to 1 second.

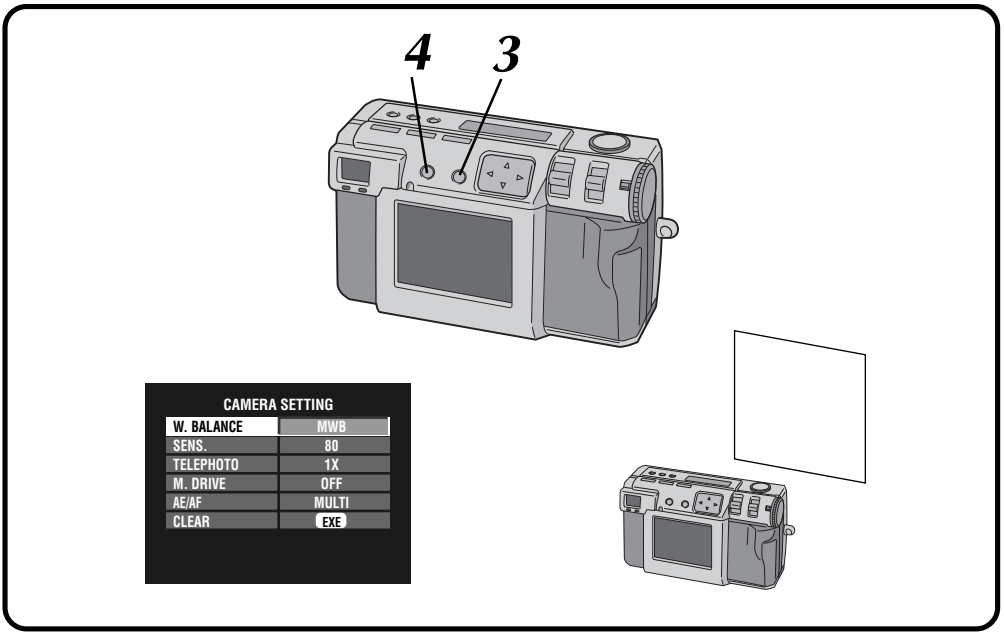
6 **Press the DSP button to turn off the menu screen.**

NOTES:

- *When shooting a night scene with "★" mode, focus to the subject manually. It may not be able to attain focus in the auto focus mode.*
- *If the shooting location is changed, for example from indoors to outdooors, it may take a little while for the white balance adjustment.*

Manual White Balance Adjustment

If you cannot achieve natural looking colors even after selecting the preset options (“☀”, “☁”, “☀”, “☽” or “AUTO”) for the white balance adjustment, follow the procedure described below to adjust the white balance manually.



1 **Select “MWB“ in step 5 on page 38.**

2 **Place a white sheet of paper about 30cm in front of the lens.**

- The white paper should fill the screen.

3 **Hold down the EXE button until the shoot standby lamp (green) starts flashing.**

- The setting is completed when the shoot standby lamp (green) has stopped flashing.
- To redo the setting, simply hold down the EXE button again.

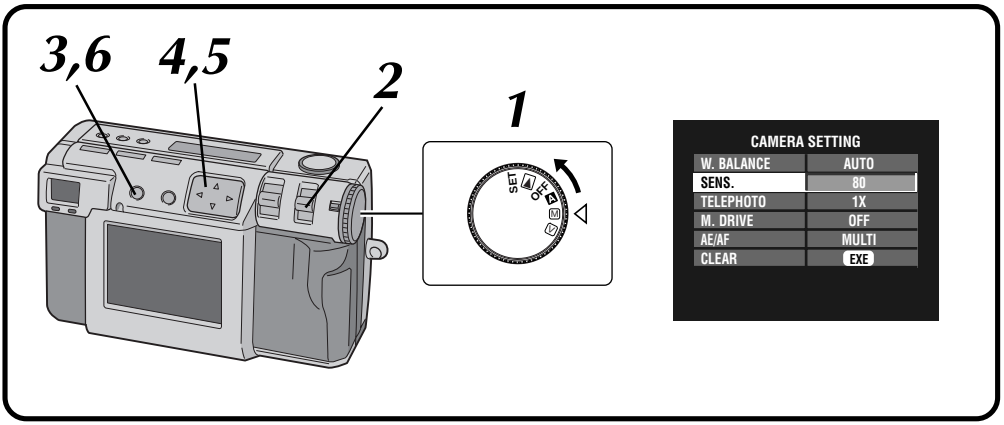
4 **Press the DSP button to turn off the menu screen.**

NOTE:

- *The color balance that you set is retained in memory until you set a different white balance under the “MWB” setting.*

Sensitivity Setting

You can change the camera's sensitivity setting when shooting at dark place or where you can not use the flash.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "MANUAL" with the MODE switch.**
- "MANUAL" appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

4 **Press the △ ▽ button to select "SENS.".**

5 **Press the ◁ ▷ button to select "80", "160" or "320".**

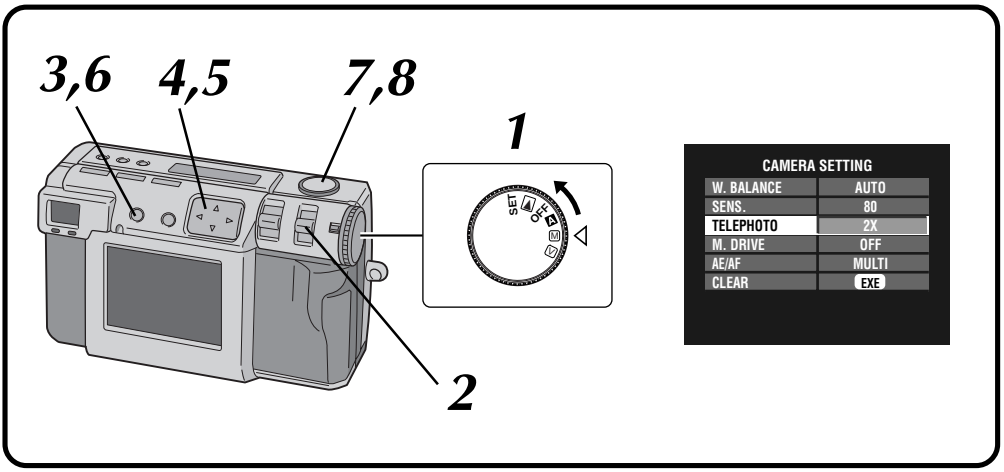
6 **Press the DSP button to turn off the menu screen.**

NOTES:

- *The sensitivity settings are ISO compliant.*
- *The noise may appear and increase on the LCD screen at the shooting if the sensitivity setting has changed.*

Changing the Zoom Power While Shooting

Depending on the image size, it is possible to enlarge a subject without sacrificing the current image quality. Because the zoom power cannot be changed in some instances if the image is large, reduce the image size (☞ pg. 28) before changing the zoom power.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "MANUAL" with the MODE switch.**
- "MANUAL" appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

4 **Press the △ ▽ button to select "TELEPHOTO".**

5 **Press the ◁ ▷ button to select "2X" or "3.2X".**
- The zoom powers that can be selected depend on the image size.
  2032 x 1536: 1X
  1024 x 768: 1X/2X
  640 x 480: 1X/2X/3.2X

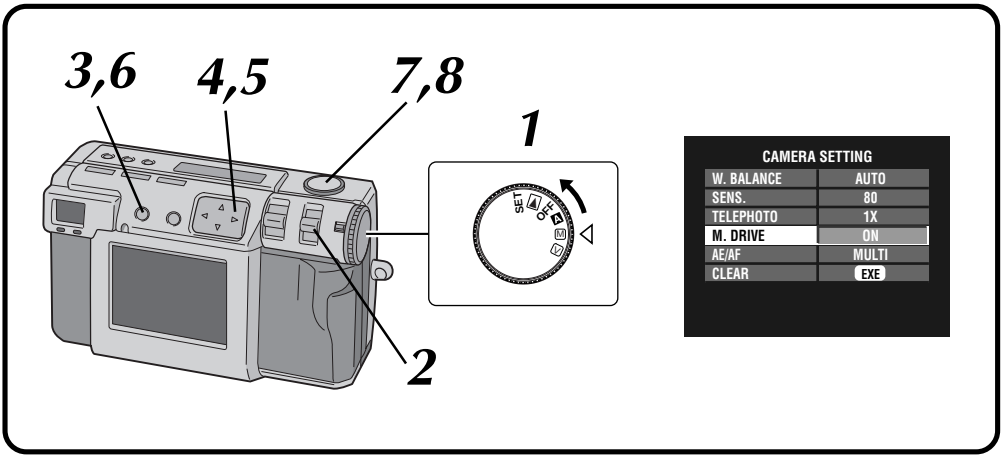
6 **Press the DSP button to turn off the menu screen.**

7 **Point the lens at the subject and half-press the Shutter button.**
- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.

8 **Press the Shutter button all the way to take the picture.**

Shooting Continuous Photos

With this mode you can shoot 2 continuous photos.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "MANUAL" with the MODE switch.**
- "MANUAL" appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

4 **Press the △ ▽ button to select "M. DRIVE".**

5 **Press the ◁ ▷ button to select "ON".**

6 **Press the DSP button to turn off the menu screen.**

7 **Point the lens at the subject and half-press the Shutter button.**
- The camera will continue to focus on the subject while the button is half-pressed. The shoot standby lamp (green) flashes.
- To display the image on the LCD screen while shooting, press the DSP button.

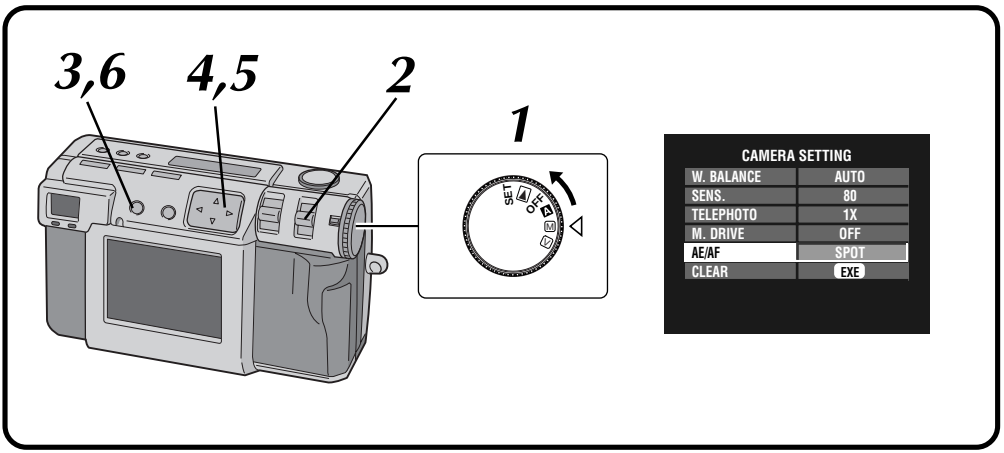
8 **Press the Shutter button all the way for over 1 second to take the picture.**
- If the flash is set, it will only flash for the first photo.

NOTES:

- *It is not possible to shoot continuous photos if the uncompressed picture quality is selected.*
- *The picture appears dark when shooting at dark location inside a room, etc.*

Changing the AE/AF Area

Normally, in this camera this setting is “MULTI” in order to prevent the subject from being out of focus while the background is in focus. If the camera does not focus on the point that you want it to, change this setting to “SPOT”.



1 **Turn the Power dial to “Ⓜ”.**

- Hold the Lock button down while turning the Power dial.

2 **Select “MANUAL” with the MODE switch.**

- “MANUAL” appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

4 **Press the △▽ button to select “AE/AF”.**

5 **Press the ◁▷ button to select “SPOT”.**

6 **Press the DSP button to turn off the menu screen.**

NOTE:

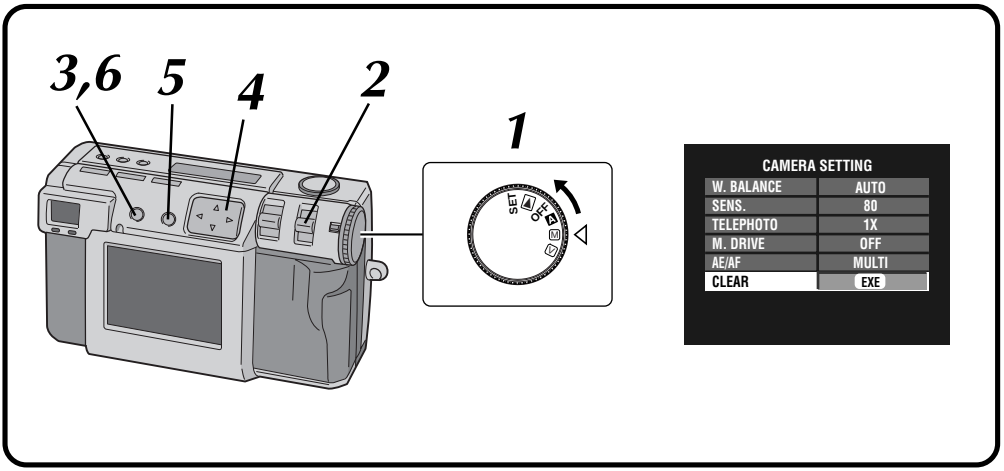
MULTI: A precise exposure setting is made by dividing the scene into several sections and then measuring the light in each section.

SPOT: The exposure is set by measuring the light in a small spot in the center of the scene. Use this mode when you want to shoot a subject with a large difference between dark and bright area, such as someone on a skihill, or someone standing in a spotlight in a darkened theater.

- *If “SPOT” is selected for shooting, press the DSP button until “⌜ ⌟” appears on the LCD screen.*

Restoring the Default Settings

Perform the procedures described below to return the camera settings to the default settings.
The settings on the SET UP screen does not return to the default settings.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "MANUAL" with the MODE switch.**
- "MANUAL" appears on the LCD panel.

3 **Press the DSP button until the CAMERA SETTING screen appears.**

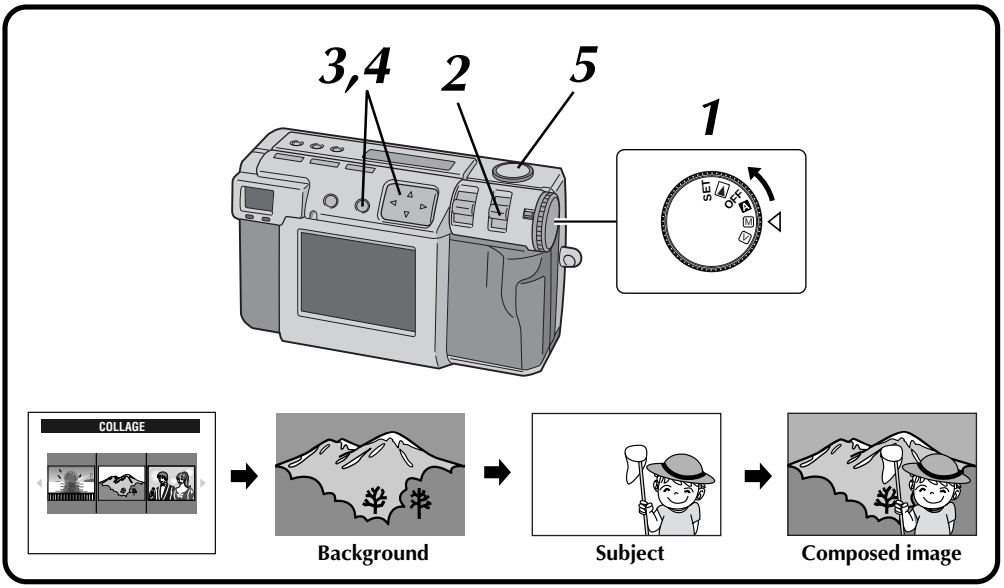
4 **Press the △ ▽ button to select "CLEAR".**

5 **Press the EXE button.**
- The camera settings return to the default settings.

6 **Press the DSP button to turn off the menu screen.**

Collage Mode

This camera is able to combine images. For example, you can combine an existing picture (as background) with a picture of a person standing in front of a white wall, etc.



1 **Turn the Power dial to "Ⓜ".**

- Hold the Lock button down while turning the Power dial.

2 **Select "COLLAGE" with the MODE switch.**

- "COLLAGE" appears on the LCD panel.
- The 3 indexed photos that have been taken previously are displayed on the LCD screen.

3 **Press the ◁▷ button to select a background, and then press the EXE button.**

- The frame size is automatically selected for the background.
- You can select the frame size (2032 x 1536, 1024 x 768 or 640 x 480) for a background.
- To change the backgrounds, press the EXE button agian.
- It is not possible to use the collage function with pictures photographed by other models of camera.

4 **Point the lens at the subject, and then press the ◁▷ button to adjust the level of composition .**

- The subject should be located in front of a white background such as a white wall.
- You can also use the zoom function.

5 **Press the Shutter button all the way to take the picture.**

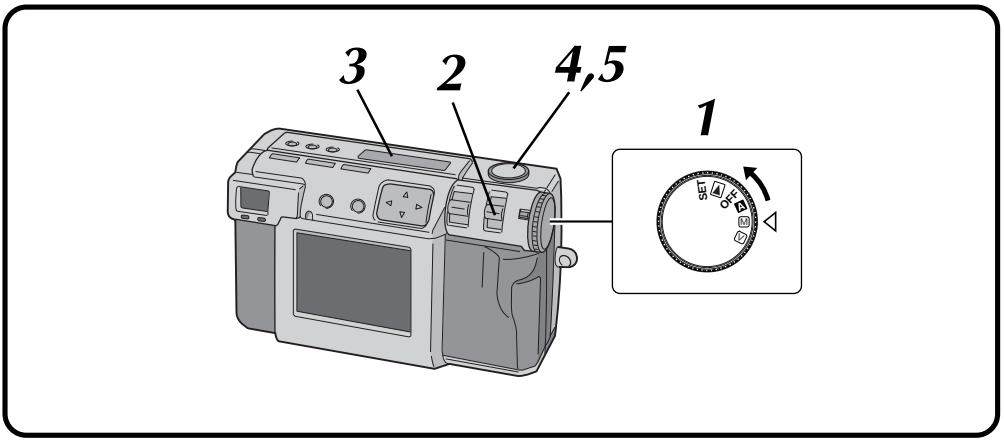
- The composed image is stored in the Memory card.

NOTES:

- *Due to large memory files created when shooting a picture of uncompressed quality in this mode, it is recommended to use a Memory card with the capacity more than 16MB.*
- *If any portion of the subject is white (clothing, for example), that portion of the subject will also be replaced with the background picture.*
- *If the subject is dark, the region that is combined with the background may appear to change when the Shutter button is pressed. However, the actual image that is recorded conforms with the composition settings that were in effect before the Shutter button was pressed.*

6M Pro-Still (Pixel Shift Mode)

The camera can achieve double its normal resolution by taking two pictures consecutively, shifting the CCD pixels one pixel row in the vertical direction between the two shots.
This mode uses the self timer to shoot a still picture. Use a tripod to prevent problems caused by shaky hands.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "6M PRO S" with the MODE switch.**
- "6M PRO S" appears on the LCD panel.

3 **Confirm that the self timer is set to "1 second".**

4 **Point the lens at the subject and half-press the Shutter button.**
- To display the image on the LCD screen while shooting, press the DSP button.

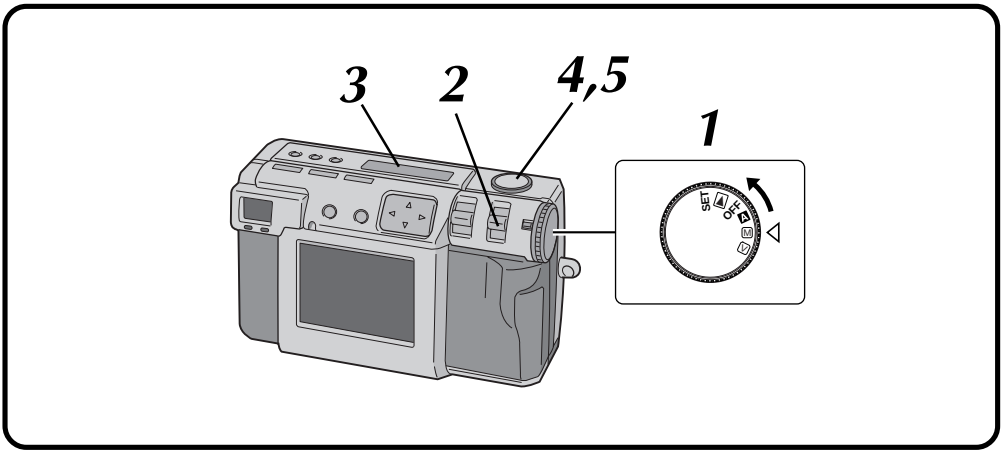
5 **Press the Shutter button all the way to take the picture.**
- The shoot standby lamp (green) goes off when the shooting has finished.

NOTES:

- *The picture size is automatically set to 2032 x 1536 with this mode.*
- *Due to large memory files created when shooting a picture of uncompressed quality in this mode, it is recommended to use a Memory card with the capacity more than 16MB.*
- *It takes a few seconds until the shooting finishes because this mode uses the exposure twice. Do not move the object and the camera until the shooting finishes completely.*

DR Pro-Still (Wide Range Mode)

The camera can expand its apparent dynamic range by combining different exposures of an extremely high contrast subject.
This mode uses the self timer to shoot a still picture. Use a tripod to prevent problems caused by shaky hands.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "DR PRO S" with the MODE switch.**
- "DR PRO S" appears on the LCD panel.

3 **Confirm that the self timer is set to "1 second".**

4 **Point the lens at the subject and half-press the Shutter button.**
- To display the image on the LCD screen while shooting, press the DSP button.

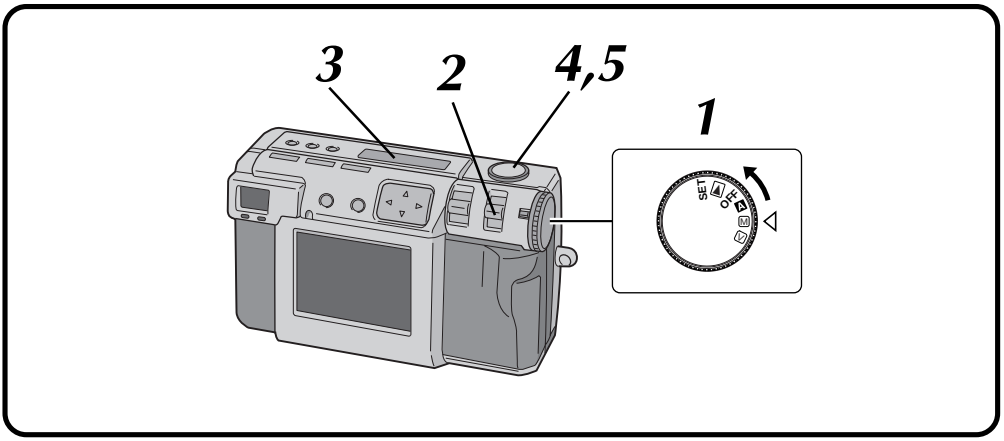
5 **Press the Shutter button all the way to take the picture.**
- The shoot standby lamp (green) goes off when the shooting has finished.

NOTES:

- *Due to large memory files created when shooting a picture of uncompressed quality in this mode, it is recommended to use a Memory card with the capacity more than 16MB.*
- *It takes a few seconds until the shooting finishes because this mode uses the exposure twice. Do not move the object and the camera until the shooting finishes completely.*

NR Pro-Still (Noise Reduction Mode)

This mode reduces electronic noise in a photograph by layering several copies of the same image. This mode is ideal for shooting works of art in dark surroundings.
This mode uses the self timer to shoot a still picture. Use a tripod to prevent problems caused by shaky hands.



1 **Turn the Power dial to "Ⓜ".**
- Hold the Lock button down while turning the Power dial.

2 **Select "NR PRO S" with the MODE switch.**
- "NR PRO S" appears on the LCD panel.

3 **Confirm that the self timer is set to "1 second".**

4 **Point the lens at the subject and half-press the Shutter button.**
- To display the image on the LCD screen while shooting, press the DSP button.

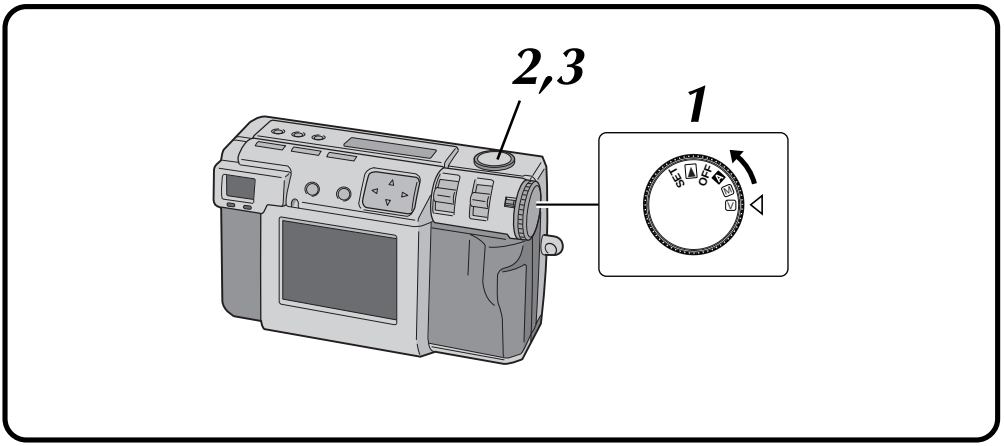
5 **Press the Shutter button all the way to take the picture.**
- The shoot standby lamp (green) goes off when the shooting has finished.

NOTES:

- *Due to large memory files created when shooting a picture of uncompressed quality in this mode, it is recommended to use a Memory card with the capacity more than 16MB.*
- *It takes a few seconds until the shooting finishes because this mode uses the exposure 8 times. Do not move the object and the camera until the shooting finishes completely.*

Video Shooting

The camera can record a maximum of 20 seconds of video. The size of the recorded video file is approximately 200 KB. This feature is useful if you want to send a short video by e-mail.



1 **Turn the Power dial to "Ⓥ".**

- Hold the Lock button down while turning the Power dial.
- "VIDEO" appears on the LCD panel.
- To display the image on the LCD screen while shooting, press the DSP button.

2 **Press the Shutter button all the way to shoot the video.**

- The flash standby lamp (red) lights during the video shooting.
- Video shooting will stop automatically after about 20 seconds.

3 **Press the Shutter button again to stop the video shooting before 20 seconds are up.**

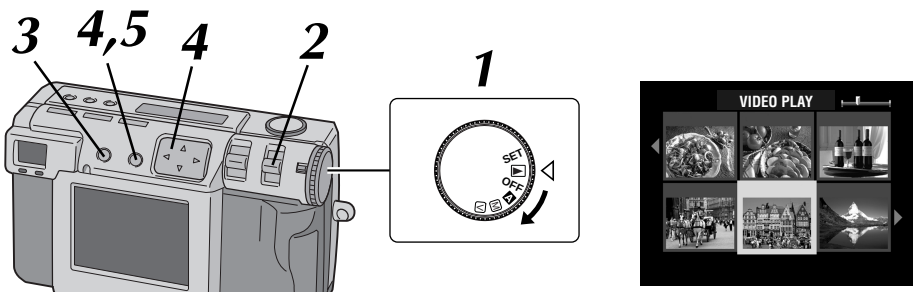
- While the video file is stored in the Memory card, the flash standby lamp (red) flashes, and then goes off when the recording has finished. Do not operate the camera while the light flashes.

NOTES:

- *It is not possible to record the sound when shooting video.*
- *It is not possible to use the flash for video shooting.*
- *It will take for a while to store a video file on a Memory card.*
- *You can change the settings of "Manual Focus" (☞ pg. 34), "Iris Setting" (☞ pg. 35), "Exposure Control" (☞ pg. 37), "Macro Shooting" (☞ pg. 36) and "Self Timer" (☞ pg. 32).*
- *You can change the settings of "White Balance Adjustment" (☞ pg. 38), "Sensitivity Setting" (☞ pg. 40), "Changing the AE/AF Area" (☞ pg. 43) and "Restoring the Default Settings" (☞ pg. 44).*

Video Playback

You can watch the recorded video on the camera's LCD screen.



1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Select "VIDEO PB" with the MODE switch.**

- "VIDEO PB" appears on the LCD panel.
- The first frame of the video (which has been most recently recorded) appears on the LCD screen.

3 **Press the DSP button to switch to an indexed display.**

4 **Press the △ ▽ ◁ ▷ button to select the video, and then press the EXE button.**

- The still image of the selected video appears.

5 **Press the EXE button to start playback.**

- Playback of the video starts.
- To stop playback, press the EXE button again.
- To select and play back another video, press the DSP button while playback is in stop mode. The indexed display will appear.

NOTES:

- *The camera may not be able to play back a video recorded by other models of camera.*
- *The camera expands and plays back data that was compressed and stored in a memory card. The data format is our own proprietary format.*
- *The image may have a mosaic appearance.*
- *When playing back a video that is shorter than 2 seconds, the video is displayed as a still image. This not a malfunction.*

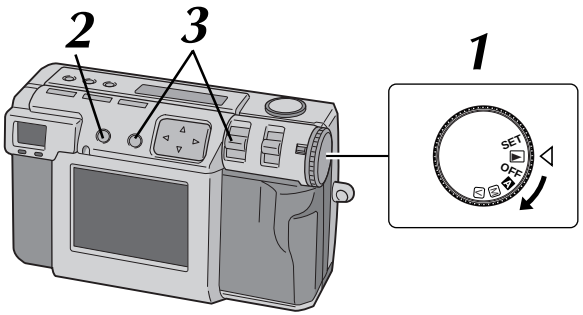
Display Mode during Playback

To change the display mode during playback, press the **DSP** button.
Press the **DSP** button repeatedly to cycle through the following modes:

- **Full size screen (with on-screen display)**
- **Full size screen (without on-screen display)**
- **6 indexed picture screen**

STILL PLAYBACK screen

Brightness Adjustment of LCD Screen



1 **Turn the Power dial to "A", "M", "V" or "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Press the DSP button.**

3 **Hold down the EXE button and push up or down the ZOOM lever.**

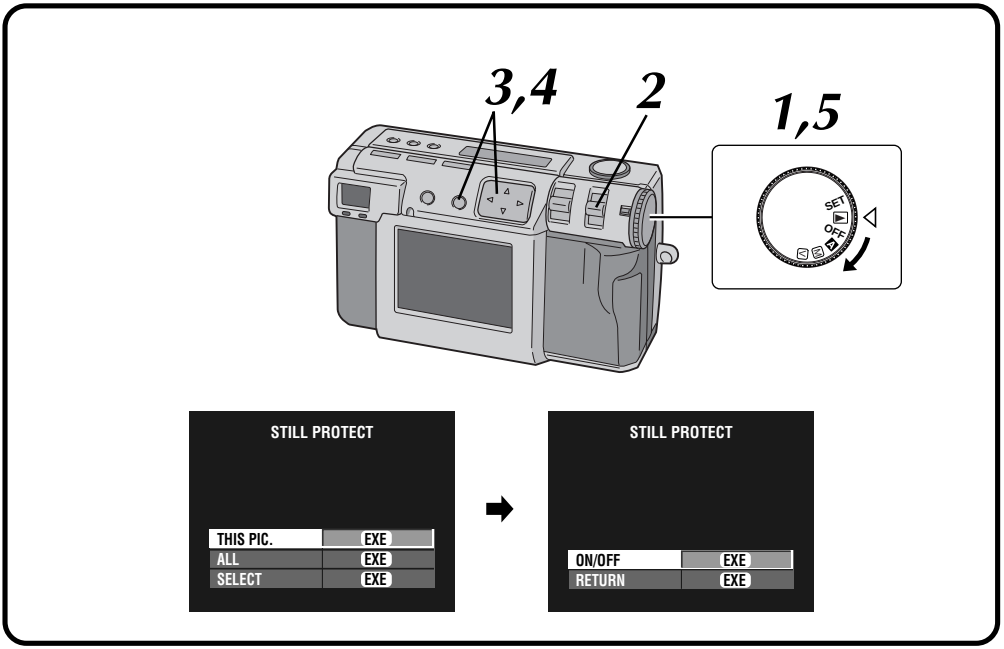
- To make the LCD screen brighter, push the ZOOM lever up.
- To make the LCD screen darker, push the ZOOM lever down.

NOTE:

- *The brightness setting does not influence the image files which is to be recorded on the Memory card.*

Protecting Pictures

You can set protection for important pictures and video files.
This features prevents you from accidentally deleting these important pictures and video files.



1 **Turn the Power dial to "▶".**

- Hold down the Lock button while turning the Power dial.
- The playback picture appears on the LCD screen.

2 **Select "STILL 🔒" with the MODE switch.**

- The STILL PROTECT screen appears.
- To protect a video file, select "VIDEO 🔒". The VIDEO PROTECT screen will appear.

3 **To protect the picture that is currently displayed, press the △▽ button to select "THIS PIC.", and then press the EXE button.**

- To protect all pictures, select "ALL", and then press the EXE button.

4 **Press the △▽ button to select "ON/OFF", and then press the EXE button.**

- "🔒" (protection indicator) appears.
- To unlock the protection, press the EXE button again.

5 **Turn the Power dial to "🅰", "Ⓜ" or "Ⓥ" for shooting.**

To protect a selected picture

1 **Select "SELECT" in step 3 in the left column, and then press the EXE button.**

- The 6 indexed picture screen appears.

2 **Press the △▽◁▷ button to select the picture that you wish to protect, and then press the EXE button.**

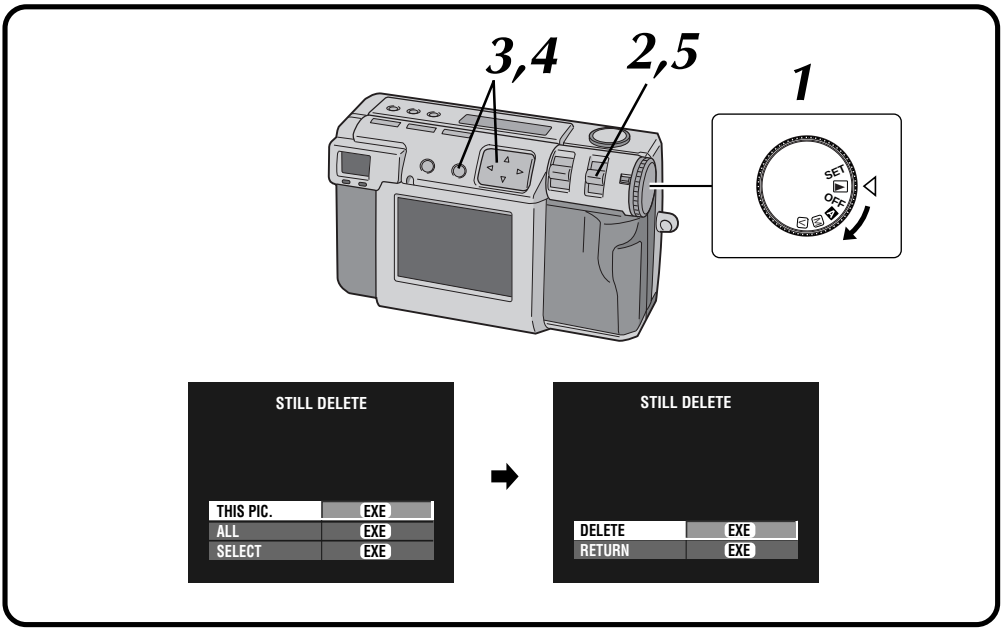
- "🔒" (protection indicator) appears.

NOTES:

- *Protected picture will be deleted if the Memory card on which it is stored is reformatted.*
- *Important pictures that must be saved should be transferred to a personal computer and stored there.*

Deleting Pictures

There are three methods for deleting pictures: deleting the displayed picture, deleting all pictures, and deleting a selected picture. Video files can be deleted in the same way.



1 **Turn the Power dial to "▶".**

- Hold down the Lock button while turning the Power dial.
- The playback picture appears on the LCD screen.

2 **Select "S-DELETE" with the MODE switch.**

- The STILL DELETE screen appears.
- To delete a video file, select "V-DELETE". The VIDEO DELETE screen will appear.

3 **To delete the picture that is currently displayed, press the △ ▽ button to select "THIS PIC.", and then press the EXE button.**

- To delete all pictures, select "ALL", and then press the EXE button. "🗑" (deletion indicator) appears.
  Press the △ ▽ button to select "END", and then press the EXE button.

4 **Press the △ ▽ button to select "DELETE", and then press the EXE button.**

5 **Select "STILL PB" with the MODE switch, and then confirm that the deletion has been completed. (☞ pg. 31)**

To delete a selected picture

1 **Select "SELECT" in step 3 in the left column, and then press the EXE button.**

- The 6 indexed picture screen appears.

2 **Press the △ ▽ ◁ ▷ button to select the picture that you wish to delete, and then press the EXE button.**

- "🗑" (deletion indicator) appears.

3 **Press the △ ▽ button to select "END", and then press the EXE button.**

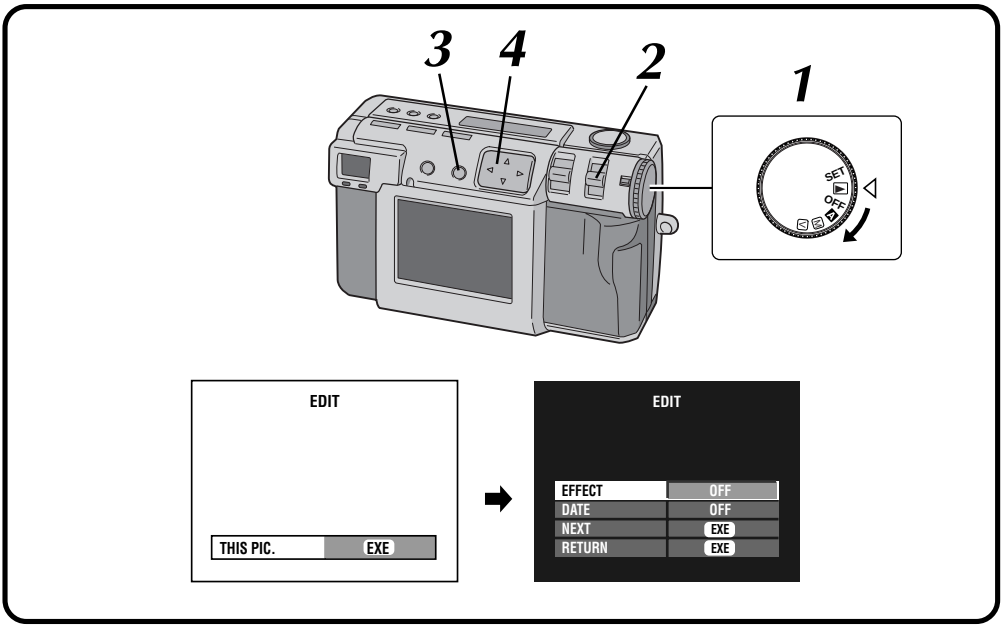
4 **Press the △ ▽ button to select "DELETE", and then press the EXE button.**

NOTES:

- *To delete the unnecessary picture which is protected, unlock the protection (☞ pg. 52) and delete the picture.*
- *Do not remove the memory card or turn off the power while the delete operation is in progress. Doing so could result in malfunction or damage to the equipment.*
- *Also, use the AC adapter provided when performing the delete operation.*

Adding Special Effects

You can add digital special effects to playback pictures.
You can make pictures black and white or sepia tone, or you can use the camera as a simple film scanner.



1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

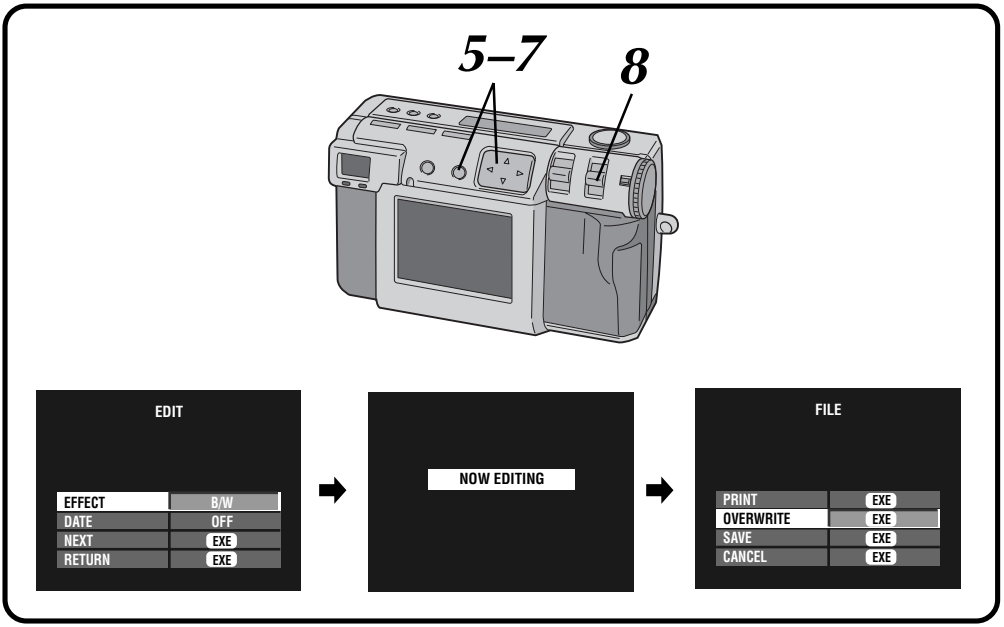
2 **Select "EDIT" with the MODE switch.**

- The EDIT screen appears.

3 **To add special effects to the picture that is currently displayed, press the EXE button.**

- To select a picture, press the DSP button. In the 6 indexed screen, press the ◁ ▷ button to select a picture, and then press the DSP button.

4 **Press the △ ▽ button to select "EFFECT".**



5 **Press the ◁ ▷ button to select “OFF”, “B/W”, “SEPIA”, or “NEGA”.**

- Press the ◁ ▷ button repeatedly to cycle through the following modes:

OFF: No special effects.
B/W: Converts a picture from color to black and white.
SEPIA: Gives a picture a sepia tone, creating a retrospective look.
NEGA: Gives a picture a negative film effect.

6 **Press the △ ▽ button to select “NEXT”, and then press the EXE button.**

- “NOW EDITING” appears, then FILE screen will appear.

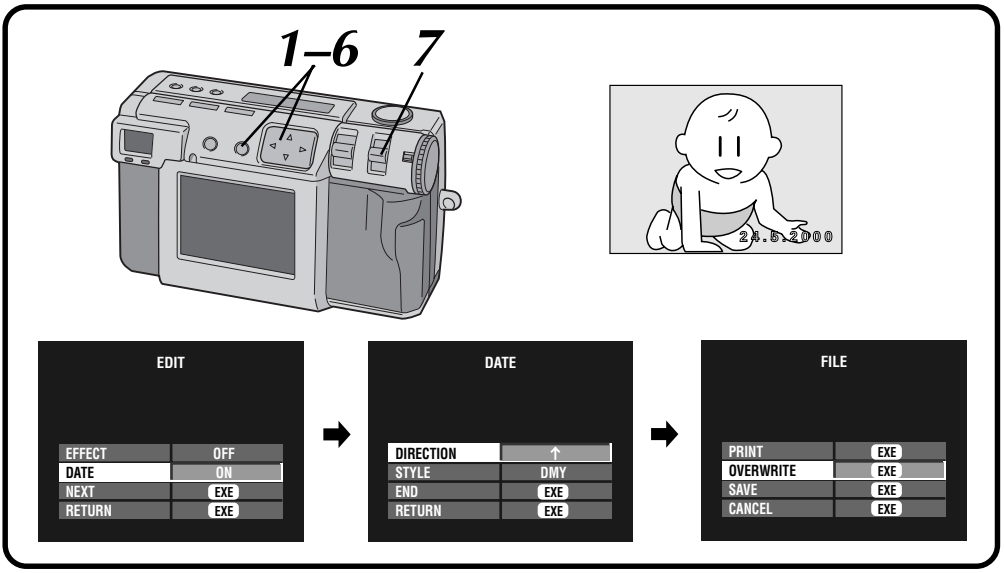
7 **Press the △ ▽ button to select “OVERWRITE” or “SAVE”, and then press the EXE button.**

- It is not possible to overwrite the file when the remaining memory of the Memory card is not enough.
- You can also add date or calendar information to a file. (☞ pg. 56, 57)
- You can print the file that you have added special effects. (☞ pg. 60)

8 **Select “STILL PB” with the MODE switch, and then confirm that the file has been saved. (☞ pg. 31)**

Inputting the Date

You can display the date when playing back or printing pictures on the optional printer.



Perform steps 1 – 3 on the page 54 before the following procedures.

1 **Press the △ ▽ button to select "DATE", and then press the ◁ ▷ button to select "ON".**

2 **Press the △ ▽ button to select "NEXT", and then press the EXE button.**

- The DATE screen appears.

3 **Press the △ ▽ button to select "DIRECTION", and then press the ◁ ▷ button to select the direction of the picture.**

- Press the ◁ ▷ button repeatedly to cycle through ↑ (up), → (right), ↓ (down) or ← (left).
- Select the up side of the picture.

↑ (up) **→ (right)**

← (left) **↓ (down)**

4 **Press the △ ▽ button to select "STYLE", and then press the ◁ ▷ button to select "YMD", "MDY" or "DMY".**

5 **Press the △ ▽ button to select "END", and then press the EXE button.**

- "NOW EDITING" appears, then FILE screen will appear.

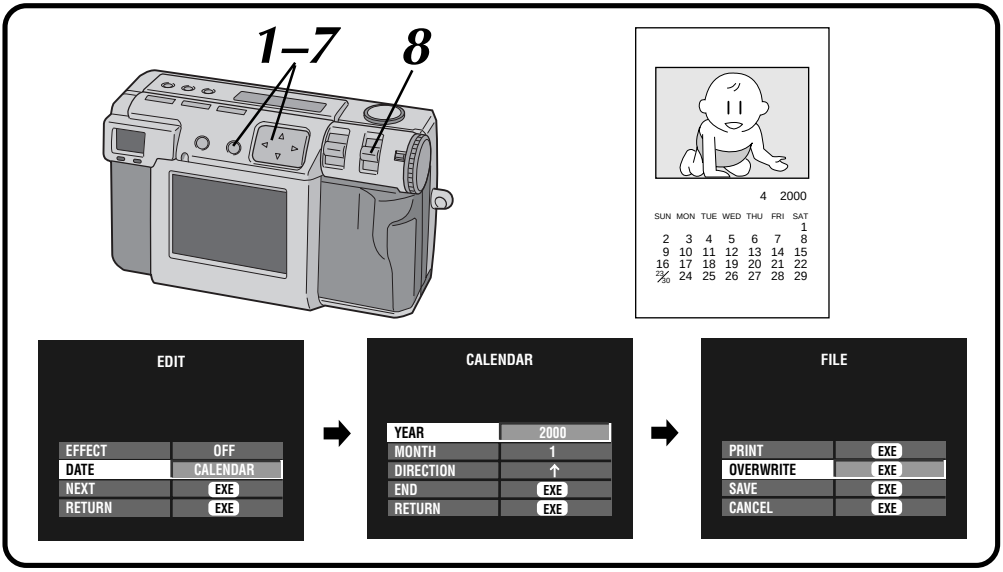
6 **Press the △ ▽ button to select "OVERWRITE" or "SAVE", and then press the EXE button.**

- You can print the file that you have added special effects. (☞ pg. 60)

7 **Select "STILL PB" with the MODE switch, and then confirm that the file has been saved. (☞ pg. 31)**

Inputting the Calendar

You can display the calendar when playing back or printing pictures on the optional printer.



Perform steps 1 – 3 on the page 54 before the following procedures.

1 **Press the △ ▽ button to select “DATE”, and then press the ◁ ▷ button to select “CALENDAR”.**

2 **Press the △ ▽ button to select “NEXT”, and then press the EXE button.**

- The CALENDAR screen appears.

3 **Press the △ ▽ button to select “YEAR”, and then press the ◁ ▷ button to select the year.**

4 **Press the △ ▽ button to select “MONTH”, and then press the ◁ ▷ button to select the month.**

5 **Press the △ ▽ button to select “DIRECTION”, and then press the ◁ ▷ button to select the direction of the picture.**

- Press the ◁ ▷ button repeatedly to cycle through ↑ (up), → (right), ↓ (down) or ← (left).
- Select the up side of the picture. (Refer to the illustration in step 3 on page 56)

6 **Press the △ ▽ button to select “END”, and then press the EXE button.**

- “NOW EDITING” appears, then FILE screen will appear.

7 **Press the △ ▽ button to select “OVERWRITE” or “SAVE”, and then press the EXE button.**

- You can print the file that you have added special effects. (☞ pg. 60)

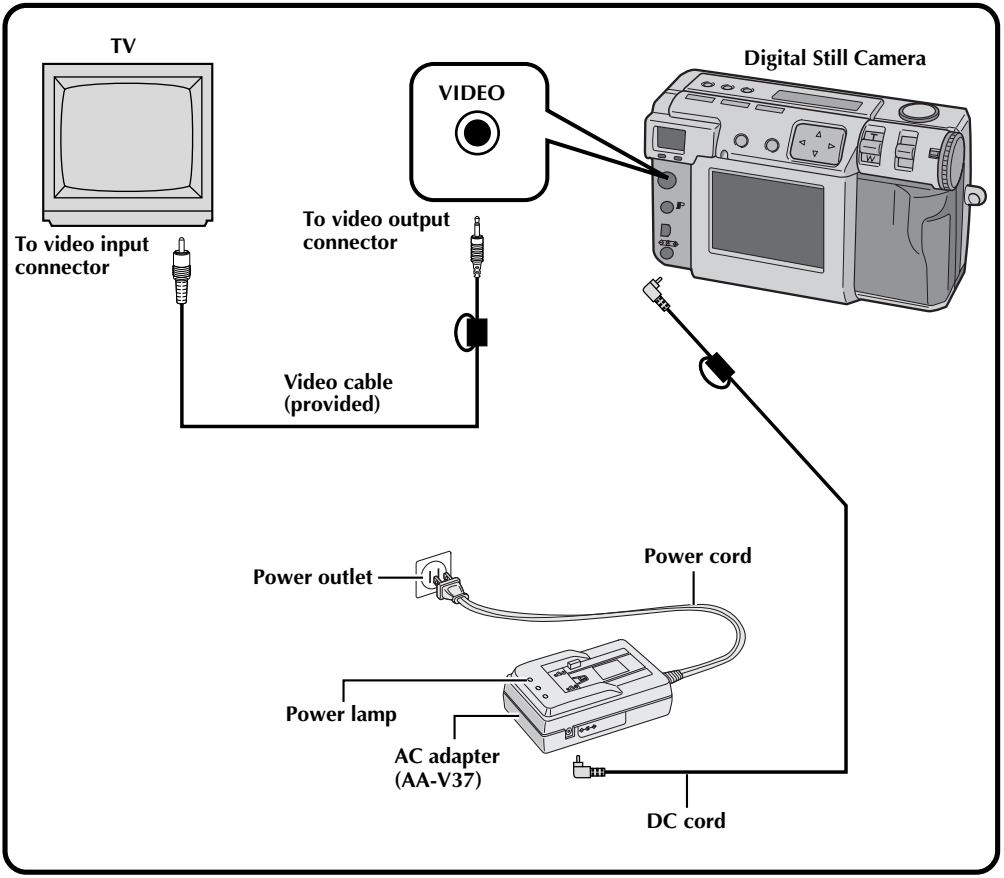
8 **Select “STILL PB” with the MODE switch, and then confirm that the file has been saved. (☞ pg. 31)**

NOTE:

- *Even if a part of the calendar cannot be seen on the LCD screen, the edited image is saved normally.*

Connecting the Camera to a TV

You can view the photographed still pictures on TV.

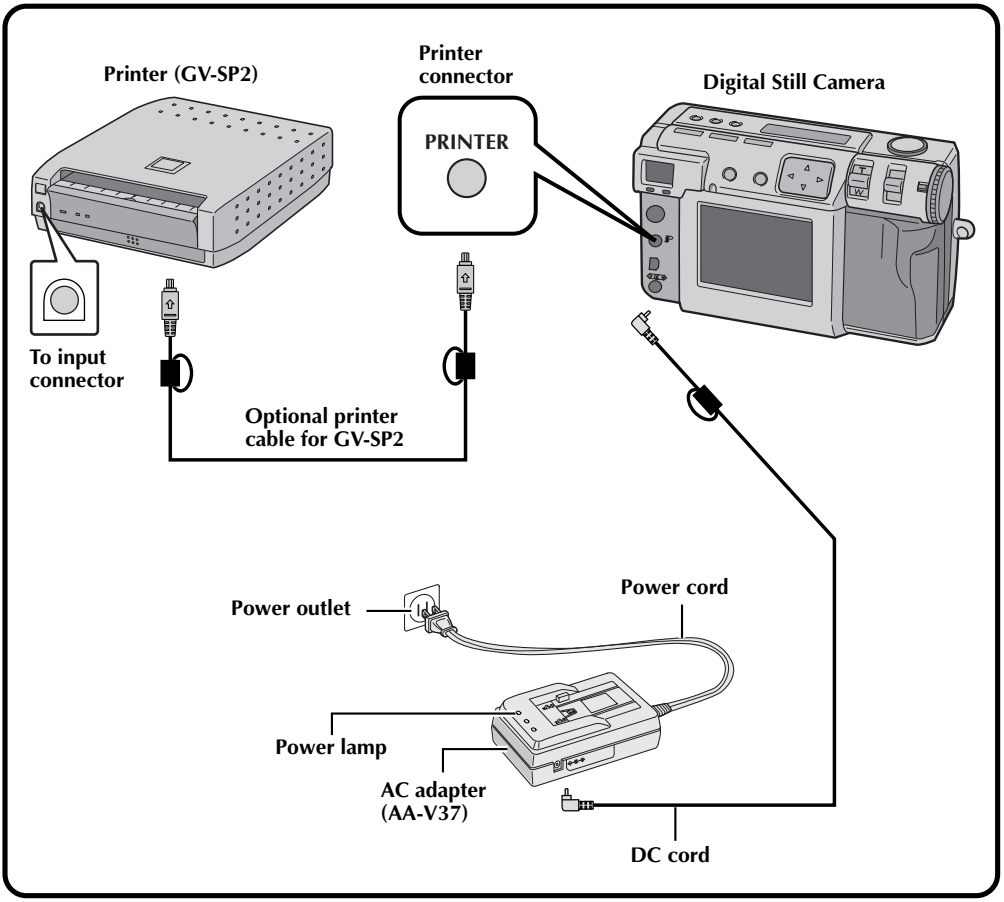


NOTES:

- *Refer to page 31 for operations of the camera.*
- *Refer to the TV's instruction manual for connections and operations of your TV.*
- *When viewing a still picture on TV, diagonal lines may take on a jagged appearance.*

Connecting the Camera to a Printer

If you connect the camera to an optional printer (GV-SP2), you can easily print a picture taken by this camera.

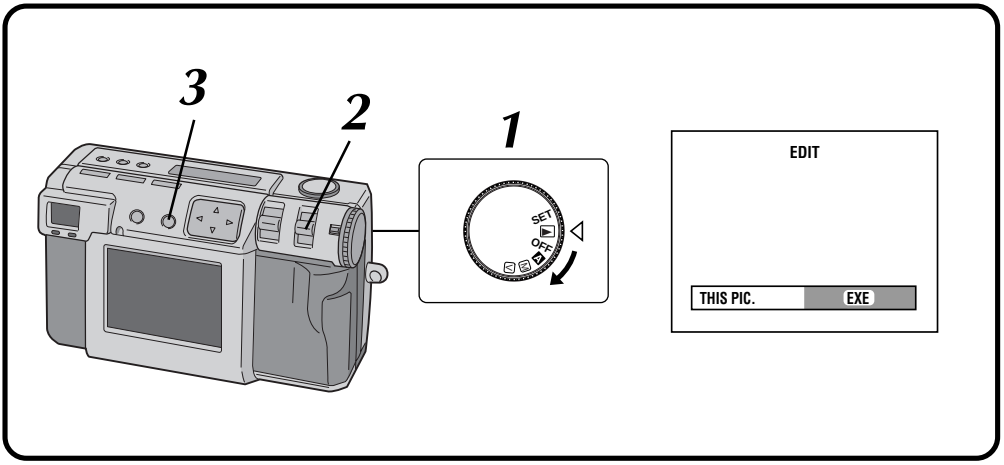


NOTES:

- *Refer to the printer's instruction manual for connections and operations of your printer.*
- *When connecting the printer cable, make sure to confirm the shape of the plug.*

Printing a Picture

If you have a JVC printer (GV-SP2), you can print a picture with (or without) a white frame. It is also possible to print multiple copies of the same photo. You can also use stickers in combination with the function that prints 16 thumbnail images to create your own photo stickers. Make sure to use the provided AC adapter (AA-V37).



1 **Turn the Power dial to "▶".**

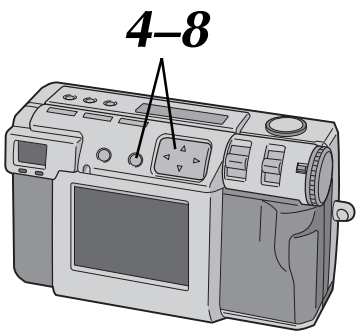
- Hold the Lock button down while turning the Power dial.

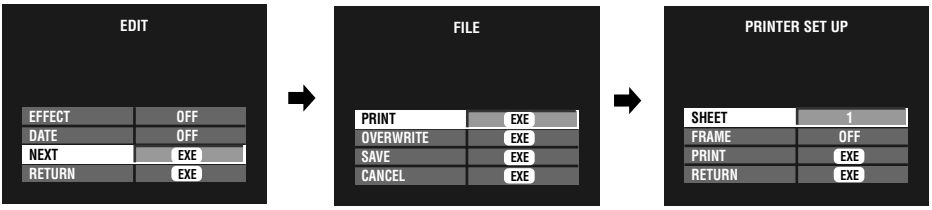
2 **Select "EDIT" with the MODE switch.**

- "EDIT" appears on the LCD panel.
- You can print the pictures with special effects, date or calendar. (☞ pg. 54 – 57)

3 **To print the picture that is currently displayed, press the EXE button.**

- To select a picture, press the DSP button. In the 6 indexed screen, press the ◁ ▷ button to select a picture, and then press the DSP button.





4 **Press the △▽ button to select “NEXT”, and then press the EXE button.**

- The FILE screen will appear.

5 **Press the △▽ button to select “PRINT”, and then press the EXE button.**

- The PRINT SET UP screen appears.

6 **Press the △▽ button to select “SHEETS”, and then press the ◁▷ button to set the number of copies.**

- Maximum number of copies are 25.

7 **Press the △▽ button to select “FRAME”, and then press the ◁▷ button to select “OFF”, “ON” or “MULTI 16”.**

8 **Press the △▽ button to select “PRINT”, and then press the EXE button.**

- “NOW PRINTING” appears.
- Pressing the EXE button during printing cancels the printing.
- After printing has finished, the FILE screen appears.

NOTES:

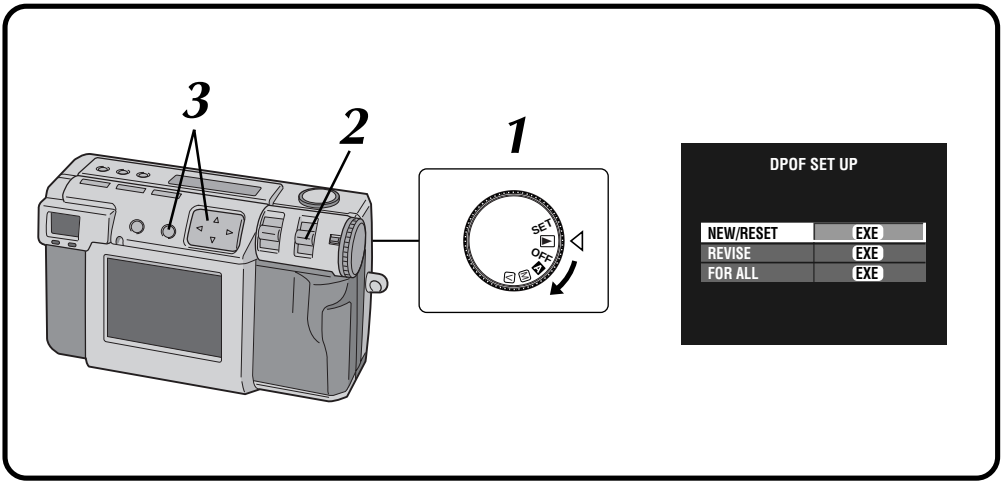
- *Printing takes longer if the picture size is set to 2032 x 1536.*
- *When printing with the calendar displayed, “OFF” cannot be selected for “FRAME”.*
- *When printing with the date or the calendar displayed, the characters may be difficult to see. If this happens, we recommend setting the picture size to 2032 x 1536. (☞ pg. 28)*
- *If an “out of paper” or other error occurs in the printer, correct the problem and then press the EXE button again to resume printing.*

Printing by DPOF Setting

If you have a JVC printer (GV-SP2), and have made the DPOF* setting for your photos, you can print your photos in the following ways:

- You can print one copy of all pictures.
- You can set and print the different number of copies for each picture.

* "DPOF" stands for "Digital Print Order Format". Data which has been written in a Memory card with the DPOF setting conforms with this standard.



1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Select "DPOF" with the MODE switch.**

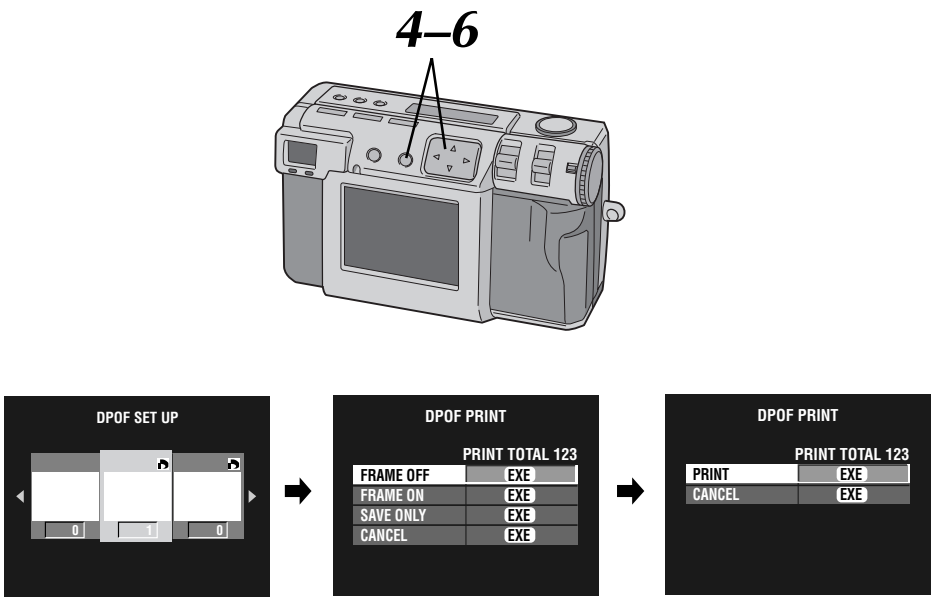
- "DPOF SET" appears on the LCD panel.
- The DPOF SET UP screen appears on the LCD screen.

3 **Press the △ ▽ button to select one of the DPOF settings, and then press the EXE button.**

NEW/RESET:
When there is no file that was set up previously.

REVISE:
When revising a file that was set up previously.

FOR ALL:
When setting the same number of copies on the all pictures.



4 **Press the ◁ ▷ button to select a picture, and press the △ ▽ button to enter the number of copies, and then press the EXE button.**

- The DPOF PRINT screen appears.

5 **Press the △ ▽ button to select "FRAME OFF" or "FRAME ON", and then press the EXE button.**

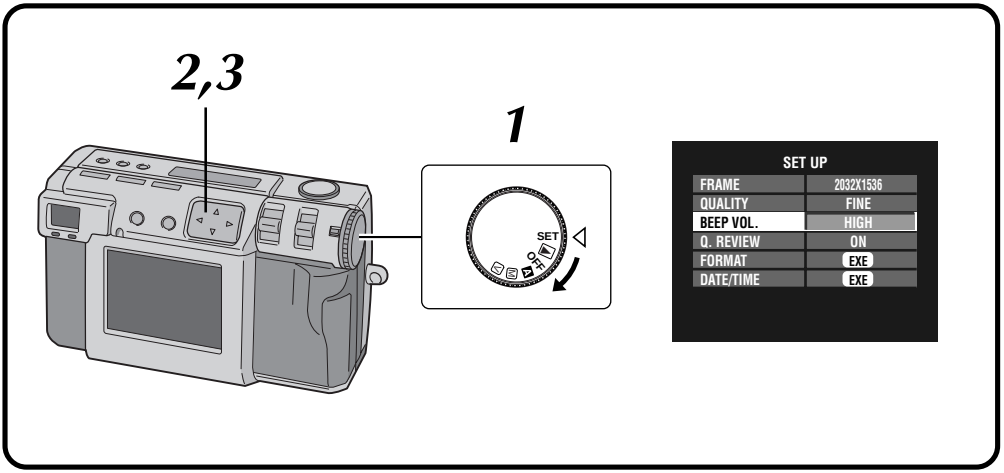
- The printing starts as set in step **4**.
- "NOW PRINTING" appears.
- Pressing the EXE button during printing cancels the printing.
- The total number of copies that have been set in step **4** is displayed.
- To return to step **3**, select "CANCEL".
- After printing has finished, the DPOF PRINT screen appears.

6 **Press the △ ▽ button to select "SAVE ONLY", and then press the EXE button.**

- The DPOF file is saved on the Memory card.

Changing Settings in the SET UP Menu

You can change the system settings according to your photography needs. For example, you can turn the beep sound off, or you can change the frame size for better picture quality.



1 **Turn the Power dial to "SET".**

- Hold the Lock button down while turning the Power dial.
- The SET UP screen appears.

2 **Press the △ ▽ button to select an item.**

3 **Press the ◁ ▷ button to change the setting.**

- To set the "FORMAT" (☞ pg. 23) or "DATE/TIME" (☞ pg. 66), after selecting the item press the EXE button.

SET UP Menu

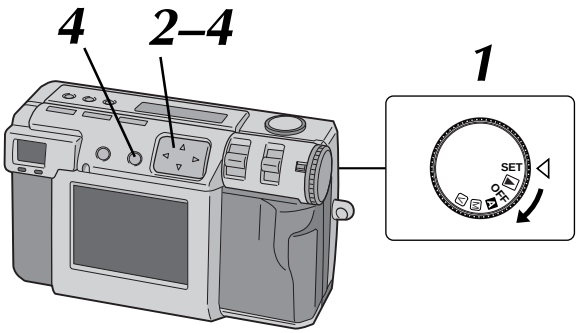
Item	Contents
FRAME	You can select the size of the picture to be recorded. There are three settings: **2032 x 1536 (QXGA class)** **1024 x 768 (XGA)** **640 x 480 (VGA)**
QUALITY	You can select the quality of the picture to be recorded. There are three settings: **FINE:** The highest picture quality. **STANDARD:** The normal picture quality. **NO COMP.:** TIFF format data that is not compressed.
BEEP VOL.	You can adjust the tone of the warning beep. There are three settings: **HIGH:** The high tone. **LOW:** The low tone. **OFF:** No beeps.
Q. REVIEW	**ON/OFF:** When "ON", pictures that you take with the camera are displayed for about 2 seconds if the LCD screen is turned on.
FORMAT	**EXE:** Formats a Memory card. (☞ pg. 23)
DATE/TIME	**EXE:** Sets the camera's internal clock. (☞ pg. 66)

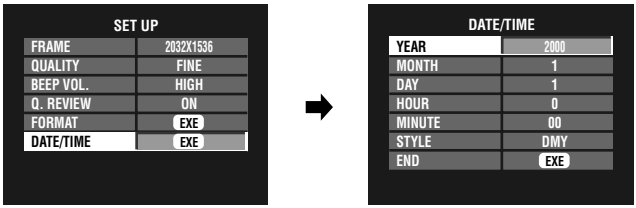
NOTES:

- *This camera has the power save function. The camera goes in the power save mode after 3 minutes of no activity. Within 7 minutes after the camera enters the power save mode, power can be restored by pressing any of the button on the camera.*
- *After 7 minutes has elapsed, the camera shuts off the power automatically. To turn the camera on again, turn the Power dial to "OFF" first and then to "A", "M", "V" or "▶".*
- *To immediately view images that you have shot, set "Q. REVIEW" to "ON".*

Setting the Date and Time

This procedure sets the camera's internal clock. Use this procedure to reset the time and date if you take the camera overseas, or if the clock otherwise needs to be reset.





1 **Turn the Power dial to "SET".**

- Hold the Lock button down while turning the Power dial.
- The SET UP screen appears.

2 **Press the △ ▽ button to select "DATE/TIME", and then press the EXE button.**

- The DATE/TIME screen appears.

3 **Press the △ ▽ button to select "YEAR", "MONTH", "DAY", "HOUR", "MINUTE", or "STYLE", and press the ◁ ▷ button to change the settings.**

4 **Press the △ ▽ button to select "END", and then press the EXE button.**

- The SET UP screen returns.

NOTES:

- *The date and time that are set are stored in memory powered by the backup battery. The backup battery is recharged when the camera is connected to a power source, such as the AC adapter, for at least 24 hours.*
- *The clock will not function if the minutes are not set.*
- *The date and time display are stored in memory only as shooting information. The date and time are not recorded in the image itself.*

SOFTWARE SECTION

You can find the latest information (in English) on the provided software program at our World Wide Web Server.
http://www.jvc-victor.co.jp/english/index-e.html

USB Driver (for Windows®/Macintosh®)

Video Player (for Windows®)

JVC Video Decoder (for Macintosh®)

Operating Environment

The host computer that runs the Windows® operating environment must satisfy the following conditions.

USB Driver

1. Microsoft® Windows® 98/Windows® 98 Second Edition, pre-installed
2. Available USB port
3. CD-ROM drive

Video Player

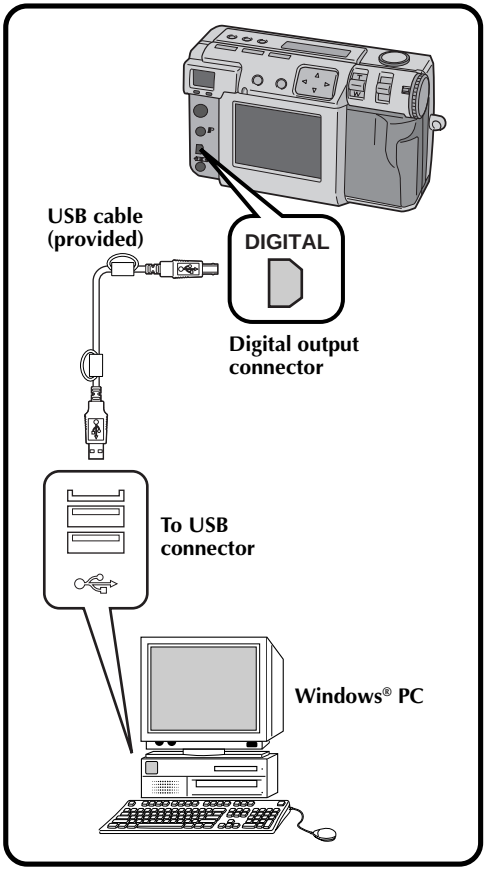
1. CPU: Intel® Pentium® 200MHz class or higher
2. Microsoft® Windows® 95/Windows® 98
3. Display capability of 65,536 colors or more
4. CD-ROM drive
5. Minimum RAM requirement: 32MB
6. Minimum hard disk space requirement: 1MB

* The system requirements information is not a guarantee that provided software applications will work on all personal computers meeting those requirements.
* Microsoft®, Windows® are either registered trademarks or trademarks of Microsoft corporation in United States and/or other countries.
* Intel®, Pentium® are registered trademarks of Intel corporation.
* Other trademarks are property of their respective owners.
* If you use Windows® 95 or a personal computer which does not have a USB port, use an optional flash path, conversion card adapter, etc. For details on the operating environment of these devices, contact the dealers or manufacturers.

NOTES:

- *Additional information regarding setup and information not contained in the instruction manual can be found in the file readme.txt. Please read this file before installing the accompanying software.*
- *The sound is not included in the video file recorded with this camera.*

USB Connection



NOTES:

- *Make sure to use the provided AC adapter (AA-V37) to power the camera, when using camera connected to a personal computer.*
- *When connecting the provided USB cable, make sure to confirm the shape of the plug.*
- *When connecting the camera to a personal computer via a USB cable, the personal computer is sometimes unable to recognize the device that is connected. Therefore, first turn both the camera and the personal computer on, and then connect the USB cable.*

Installing the USB Driver

For details on the basic operation of Windows® 98, refer to the instruction manual provided with your computer or Windows® 98.

Preparation

Start Windows® 98.

- If you are running other software, close that software. (Make sure that there are no other application icons open on the task bar.)

1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Select "USB MODE" with the MODE switch.**

- "USB MODE" appears on the LCD panel.

3 **Connect the camera to the computer using the provided USB cable. (☞ pg. 68)**

- The "Add New Hardware Wizard" window will appear.

4 **Load the provided CD-ROM to the CD-ROM drive.**

5 **Click the "Next" button.**

6 **Click the "Next" button.**

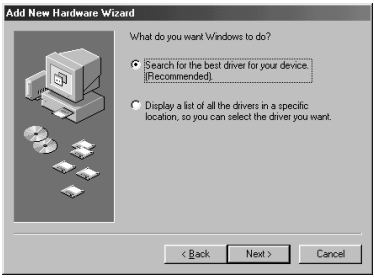
7 **Confirm that "CD-ROM drive" has been checked, then click the "Next" button.**

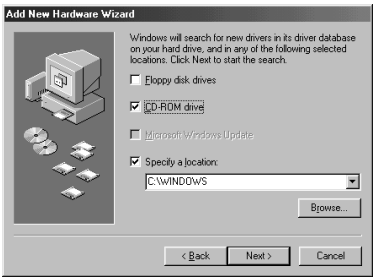
- When the loaded CD-ROM is not found, click "Browse" button and select the provided CD-ROM.

8 **Click the "Next" button.**

9 **Click the "Finish" button.**

Add New Hardware Wizard
This wizard searches for new drivers for:
USB Printer
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel


Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel


Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
C:\WINDOWS
Browse...
< Back
Next >
Cancel

Add New Hardware Wizard
Windows driver file search for the device:
MK Systems USB driver for GC-QX3
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
D:\GC-QX3USB.INF
< Back
Next >
Cancel

Add New Hardware Wizard
MK Systems USB driver for GC-QX3
Windows has finished installing the software that your new hardware device requires.
< Back
Finish
Cancel

Installing the Video Player

For details on the basic operation of Windows® 98, refer to the instruction manual provided with your computer or Windows® 98.

Preparation

Start Windows® 98.

- If you are running other software, close that software. (Make sure that there are no other application icons open on the task bar.)

1 **Load the provided CD-ROM to the CD-ROM drive.**

2 **Double click on the CD-ROM icon for the loaded CD-ROM, then double click on the "Vplay" folder.**

- The Vplay folder opens.

3 **Double click on the "Vpw100e" icon.**

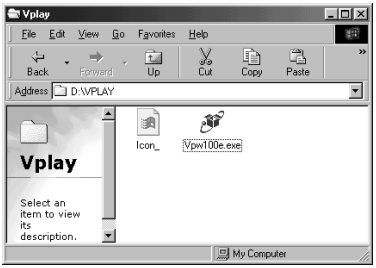
4 **Click the "Next" button.**

5 **Click the "Yes" button.**

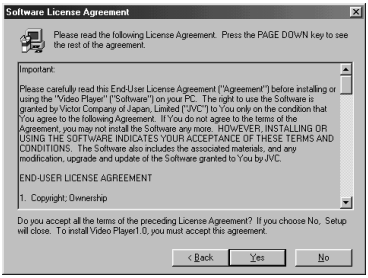
6 **Click the "Next" button.**

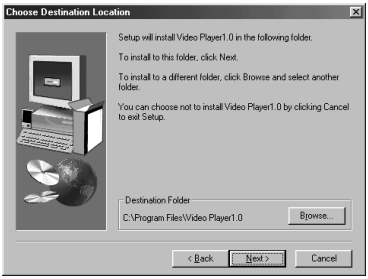
7 **Restart the computer.**

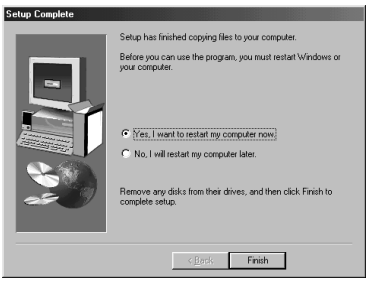
- Click the "Yes, I want to restart my computer now", then click the "Finish" button.



Welcome
Welcome to the Video Player1.0 Setup program. This program will install Video Player1.0 on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next > Cancel


Software License Agreement
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.
Important:
Please carefully read this End-User License Agreement ("Agreement") before installing or using the "Video Player" ("Software") on your PC. The right to use the Software is granted by Victor Company of Japan, Limited ("JVC") to You only on the condition that You agree to the following Agreement. If You do not agree to the terms of the Agreement, you may not install the Software any more. HOWEVER, INSTALLING OR USING THE SOFTWARE INDICATES YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS. The Software also includes the associated materials, and any modification, upgrade and update of the Software granted to You by JVC.
END-USER LICENSE AGREEMENT
1. Copyright; Ownership
Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Video Player1.0, you must accept this agreement.
< Back Yes No


Choose Destination Location
Setup will install Video Player1.0 in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install Video Player1.0 by clicking Cancel to exit Setup.
Destination Folder
C:\Program Files\Video Player1.0
Browse...
< Back Next > Cancel


Setup Complete
Setup has finished copying files to your computer.
Before you can use the program, you must restart Windows or your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back Finish

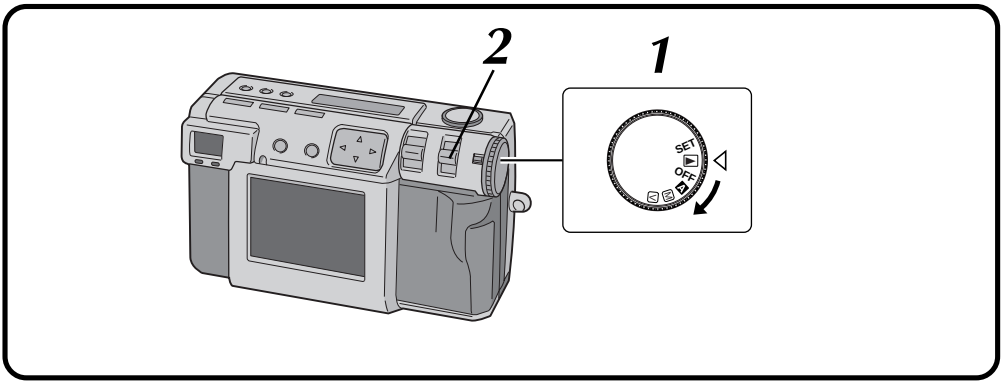
Sending Image File to Computer

For details on the basic operation of Windows® 98, refer to the instruction manual provided with your computer or Windows® 98.

Preparation

Start Windows® 98.

- Insert a Memory card in which there are files you want to send to a computer. (☞ pg. 22)
- It is recommended to protect the important files in advance. (☞ pg. 52)



1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Select "USB MODE" with the MODE switch.**

- "USB MODE" appears on the LCD panel.

3 **Connect the camera to the computer using the provided USB cable. (☞ pg. 68)**

4 **Double click on the "Removable Disk" in the "My Computer" window.**

5 **Double click on the "DCVI (video)" or "DCIM (still picture)" folder.**

6 **Double click on the "100jvcgc" folder.**

7 **Copy the necessary files from "100jvcgc" folder to the desktop of the computer.**

NOTES:

- *When a file is being accessed from a personal computer, the flash standby lamp (red) will flash. Never disconnect the USB cable while the flash standby lamp (red) is flashing.*
- *The personal computer is sometimes unable to recognize the device that is connected via a USB cable. Therefore, when the copy of files has been finished, disconnect the USB cable and then control the camera with the MODE switch, Power dial, etc.*

Sending a video by e-mail

You can easily send the copied video file as an attachment through your normal e-mail system.

NOTE:

- *To open the video file which is sent by e-mail, you need a Video Player to expand the compressed file. You can also download the Video Player at our website. (http://www.jvc-victor.co.jp/english/download/index-e.html)*

Basic Playback

There are several different methods for playing back a video on the Video Player, depending on how you load the file.

Preparation

Start Windows® 98.

- Send the video file that you want to play back to the computer. (☞ pg. 71)

1 **Click the "Start" button.**

- The Start Menu bar appears.

2 **Point the cursor to "Program".**

3 **Point the cursor to "Video Player".**

4 **Click the "Video Player".**

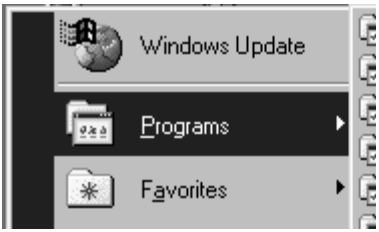
- The Video Player window opens.

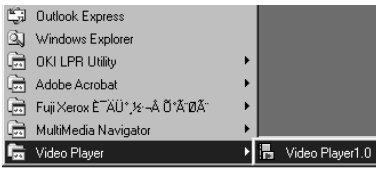
5 **Click the "Open" button, then select the video file.**

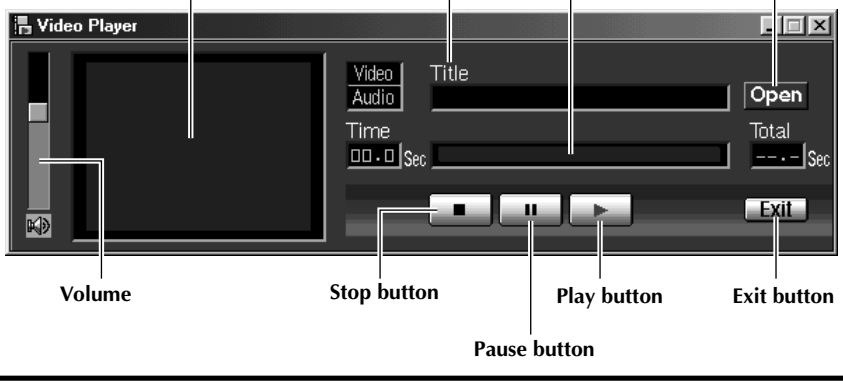
- Select the file with the extension ".jmm".

6 **Click the "►" button.**

- Playback of the video starts.
- The sound is not included in the video file recorded with this camera.
- Do not change the volume setting. Doing so changes the volume setting of your computer.







Easy Playback

You can start playback easily by double clicking on the icon of a video file.

Preparation

Start Windows® 98.

- Send the video file that you want to play back to the computer. (☞ pg. 71)

1 **Double clicking on the icon of a video file.**

- Select the file with the extension ".jmm".

2 **Playback starts automatically.**

- To stop playback, click the "■" button, and to pause, click the "❚❚" button.

3 **When the playback finishes, click the "Exit" button.**

- The Video Player window closes.

Uninstalling the Software

When you don't need to use the Video Player, uninstall the program.

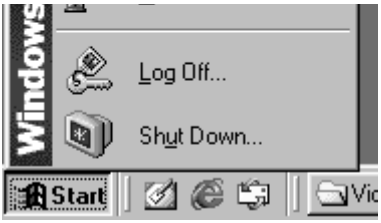
Preparation

Start Windows® 98.

- If you are running other software, close that software. (Make sure that there are no other application icons open on the task bar.)

1 **Click the "Start" button.**

• The Start Menu bar appears.



2 **Point the cursor to "Settings".**

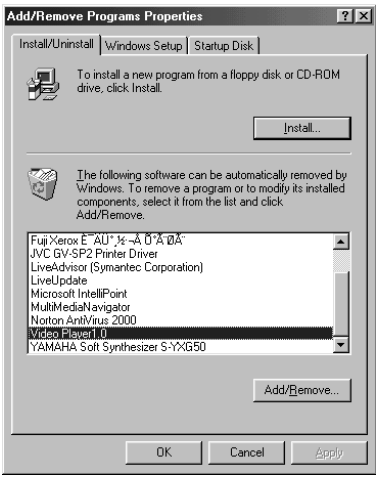
3 **Click the "Control Panel".**

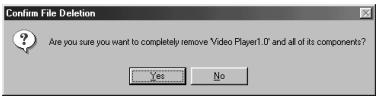
4 **Double click on the "Add/Remove Programs".**

5 **Click the "Video Player", then click the "Add/Remove" button.**

6 **Click the "Yes" button.**

7 **After confirming that the Video Player is removed, click the "OK" button.**





Remove Programs From Your Computer
InstallShield will remove the software 'Video Player1.0' from your computer. Please wait while each of the following components is removed...
Shared program files...
Standard program files...
Folder items...
Program folders...
Program directories...
Program registry entries...
Uninstall successfully completed.
OK

SOFTWARE SECTION FOR Macintosh®

Operating Environment

The host computer that runs the Macintosh® operating environment must satisfy the following conditions.

USB Driver

1. USB-compatible computer (iMac™, iBook™, Power Mac™ G3/G4, Power Book™ G3, etc.)
2. Mac OS 8.5.1/Mac OS 8.6/Mac OS 9.0

JVC Video Decoder

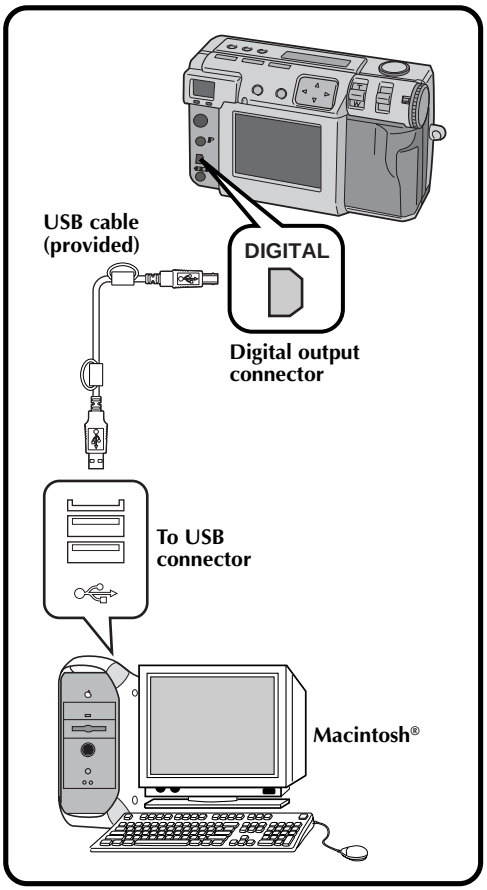
1. Power PC 603e/120MHz or faster
2. Mac OS 7.6.1 or later
3. QuickTime 3.0 or later
4. Minimum RAM requirement: 32MB
5. Minimum hard disk space requirement: 1MB

* Macintosh® is a registered trademark of Apple Computer.
* Other trademarks are property of their respective owners.
* If you use Macintosh® which does not have a USB port, use an optional flash path, conversion card adapter, etc. For details on the operating environment of these devices, contact the dealers or manufacturers.

NOTES:

- *Additional information regarding setup and information not contained in the instruction manual can be found in the file readme.txt. Please read this file before installing the accompanying software.*
- *The sound is not included in the video file recorded with this camera.*

USB Connection



NOTES:

- *Make sure to use the provided AC adapter (AA-V37) to power the camera, when using camera connected to a personal computer.*
- *When connecting the provided USB cable, make sure to confirm the shape of the plug.*
- *When connecting the camera to a personal computer via a USB cable, the personal computer is sometimes unable to recognize the device that is connected. Therefore, first turn both the camera and the personal computer on, and then connect the USB cable.*

Installing the USB Driver

For details on the basic operation of Mac OS, refer to the instruction manual provided with your Macintosh® or Mac OS.

Preparation

Start Macintosh®.

- If you are running other software, close that software.

1 **Load the provided CD-ROM to the CD-ROM drive.**

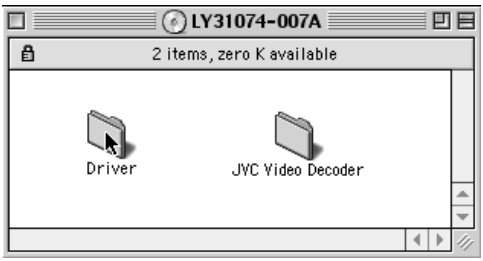
2 **Double click on the loaded CD-ROM icon.**

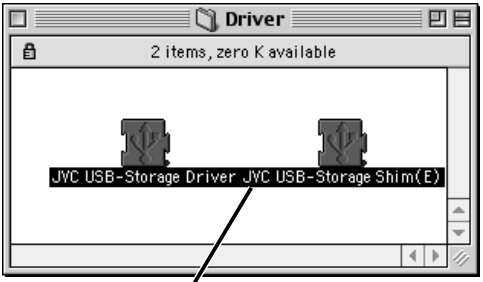
3 **Double click on "Driver" folder.**

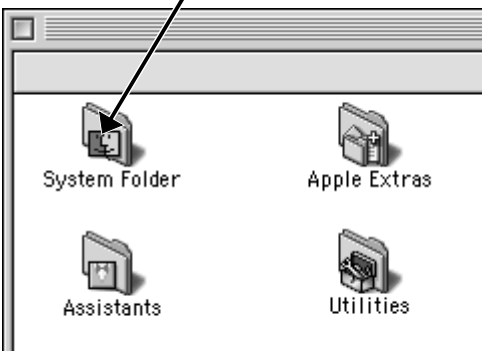
4 **Drag the "JVC USB-Storage Driver" and "JVC USB-Storage Shim (E)" icons to the "System Folder", then drop the icon there.**

5 **Click the "OK" button when the dialog box appears.**

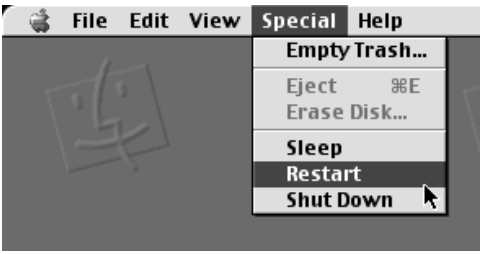
6 **Restart the computer.**







These items need to be stored in the Extensions folder in order to be available to the computer. Put these items into the Extensions folder?
Cancel
OK



Installing the JVC Video Decoder

For details on the basic operation of Mac OS, refer to the instruction manual provided with your Macintosh® or Mac OS.

Preparation

Start Macintosh®.

- If you are running other software, close that software.

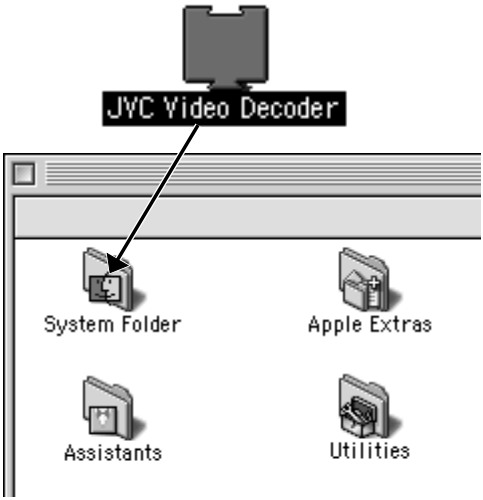
1 **Load the provided CD-ROM to the CD-ROM drive.**

2 **Double click on the loaded CD-ROM icon.**

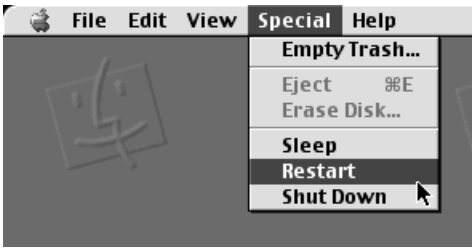
3 **Drag the "JVC Video Decoder" icon to the "System Folder", then drop the icon there.**

4 **Click the "OK" button when the dialog box appears.**

5 **Restart the computer.**



This item needs to be stored in the Extensions folder in order to be available to the computer. Put "JVC Video Decoder" into the Extensions folder?
Cancel
OK



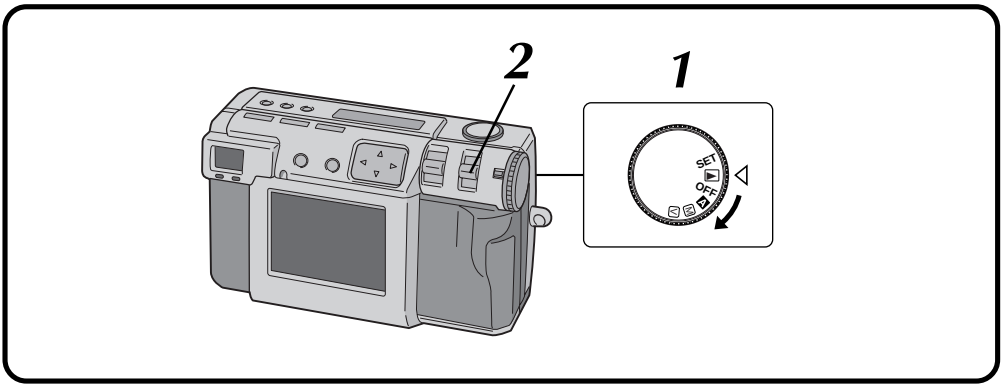
Sending Image File to Computer

For details on the basic operation of Mac OS, refer to the instruction manual provided with your Macintosh® or Mac OS.

Preparation

Start Macintosh®.

- Insert a Memory card in which there are files you want to send to a computer. (☞ pg. 22)
- It is recommended to protect the important files in advance. (☞ pg. 52)



1 **Turn the Power dial to "▶".**

- Hold the Lock button down while turning the Power dial.

2 **Select "USB MODE" with the MODE switch.**

- "USB MODE" appears on the LCD panel.

3 **Connect the camera to the computer using the provided USB cable. (☞ pg. 75)**

- The "untitled" icon appears on the desktop of the computer.

4 **Double click on the "untitled" icon.**

5 **Double click on the "DCVI (video)" or "DCIM (still picture)" folder.**

6 **Copy the necessary files from the "DCVI (video)" or "DCIM (still picture)" folder to the desktop of the computer.**

- To copy a file in easy way, hold down the "option" key while dragging the file to the destination.

NOTES:

- *When a file is being accessed from a personal computer, the flash standby lamp (red) will flash. Never disconnect the USB cable while the flash standby lamp (red) is flashing.*
- *The personal computer is sometimes unable to recognize the device that is connected via a USB cable. Therefore, when the copy of files has been finished, disconnect the USB cable and then control the camera with the MODE switch, Power dial, etc.*

Sending a video by e-mail

You can easily send the copied video file as an attachment through your normal e-mail system.

NOTE:

- *To open the video file which is sent by e-mail, you need a JVC Video Decoder to expand the compressed file. You can also download the JVC Video Decoder at our website. (http://www.jvc-victor.co.jp/english/download/index-e.html)*

Basic Playback

There are several different methods for playing back a video on the QuickTime Player (or Movie Player), depending on how you load the file.

Preparation

Start Macintosh®.

- Make sure that you installed the JVC Video Decoder in advance. (☞ pg. 77)
- Send the video file that you want to play back to the computer. (☞ pg. 78)

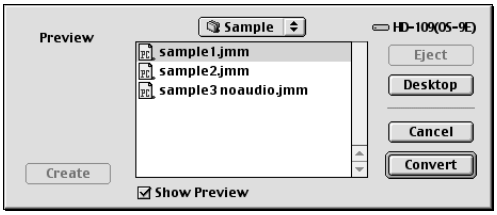
1 **Double click on the "QuickTime Player" icon.**

- The QuickTime Player is nomally provided with Macintosh®.

2 **Select "Open Movie" from the "File" menu.**

3 **Select the video file in the dialog box.**

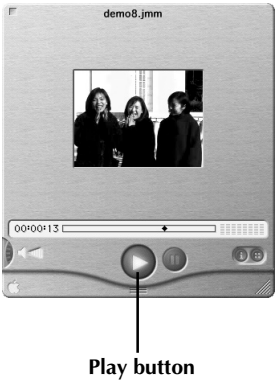
- Select the file with the extension ".jmm".



4 **Click the "Convert" button.**

5 **Click the "►" button.**

- Playback of the video starts.
- The sound is not included in the video file recorded with this camera.
- For details on the basic operation of QuickTime Player (or Movie Player), refer to the instruction manual provided with your Macintosh® or visit the website of Apple Computer.



Play button

Easy Playback

You can start playback easily by double clicking on the icon of a video file.

Preparation

Start Macintosh®.

- Make sure that you installed the JVC Video Decoder in advance. (☞ pg. 77)
- Send the video file that you want to play back to the computer. (☞ pg. 78)

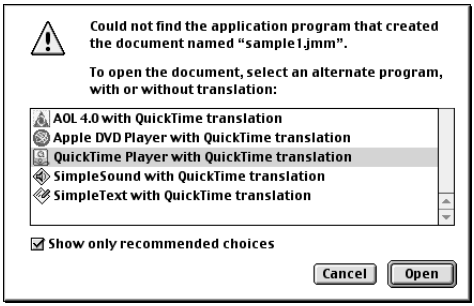
1 **Double clicking on the icon of a video file.**

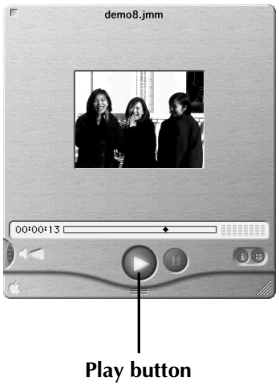
- Select the file with the extension ".jmm".

2 **Select the "QuickTime Player" in the dialog box, then click the "Open" button.**

3 **Click the "►" button.**

- Playback of the video starts.
- For details on the basic operation of QuickTime Player (or Movie Player), refer to the instruction manual provided with your Macintosh® or visit the website of Apple Computer.


Could not find the application program that created the document named "sample1.jmm".
To open the document, select an alternate program, with or without translation:
AOL 4.0 with QuickTime translation
Apple DVD Player with QuickTime translation
QuickTime Player with QuickTime translation
SimpleSound with QuickTime translation
SimpleText with QuickTime translation
Show only recommended choices
Cancel
Open



NOTE:

- *Do not use PC Exchange to register "jmm" files. In some cases it is not possible to play back a "jmm" file that was copied from a DOS-formatted floppy disk.*

Uninstalling the Software

When you don't need to use the JVC Video Decoder, uninstall the program.

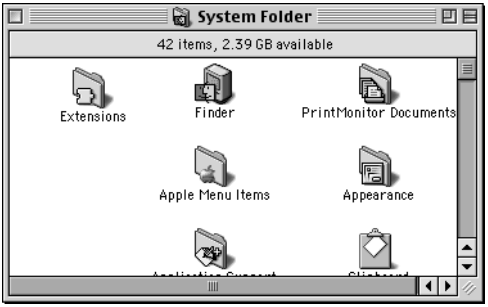
Preparation

Start Macintosh®.

- If you are running other software, close that software.

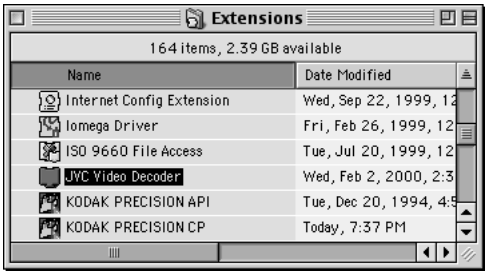
1 **Double click the "System Folder" icon.**

- The System Folder opens.



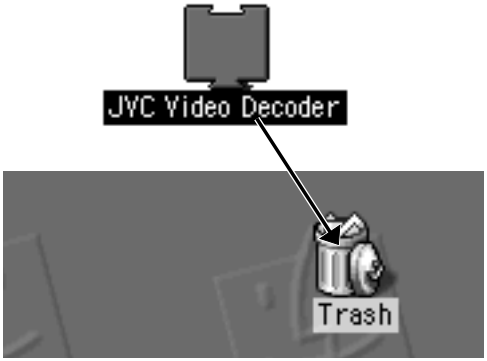
2 **Double click the "Extensions" folder icon.**

- The Extensions folder opens.



3 **Drag the "JVC Video Decoder" icon to "Trash", then drop the icon there.**

- If you want to delete the file completely, empty the trash.



This digital still camera contains a microprocessor. The operation of the microprocessor can be disrupted by electronic noise or interference. If this happens, disconnect the power source (battery, AC adapter, etc.) from the camera, and then resume using the camera. If this does not solve the problem, and taking the action described below also does not solve the problem, contact your nearest JVC dealer.

SYMPTOM	CORRECTIVE ACTION	PAGE
Power supply		
The power does not come on.	● Make sure that the battery is fully charged. ● Make sure that the power supply is connected correctly.	18 20
While shooting		
Cannot shoot photos.	● Make sure that the Power dial is set to "A" or "M".	26
Cannot see the picture on the screen.	● Try turning the power off and then back on again.	26
Cannot use the menu functions.	● Make sure that the Power dial is not set to "A".	28
Half pressing the shutter button does not focus the camera.	● Make sure that there is sufficient light, and make sure that there is enough contrast in your subject.	34
When there is sunlight in the shot, the screen temporarily darkens or becomes black.	● This is not a malfunction.	—
The image on the LCD screen is dark, or too white.	● Use the ZOOM lever to adjust the brightness of the LCD screen. ● You may be playing back a picture in a cold location. The LCD screen will appear slightly darker when it is cold. This is not a malfunction. ● The LCD screen may be nearing the end of its operational life. Contact your nearest JVC dealer.	51
Memory Full.	● The "MEMORY FULL" message appears when the memory is full, making it impossible to take any more pictures. Either use a Memory card that has some free space in it, or create some free space in memory by saving pictures to a personal computer and then deleting those pictures from the camera's memory.	—
Color noise appears in contours of the subject on the LCD screen.	● This is not a malfunction. There is no problem with the recorded images.	—
The power turned off while attempting flash photography.	● The power may turn off during flash photography, even if the remaining battery power is indicated to be at half of the battery capacity.	—

SYMPTOM	CORRECTIVE ACTION	PAGE
Others		
Cannot shoot photos even if the remaining photos counter shows number more than 0.	● The remaining photos counter indicates the approximate number. It may not be able to shoot a photo even if the counter shows number more than 0, depending on the image size and quality.	28
The LCD screen is splotchy.	● Make sure that you are not pressing on the surface of the LCD screen anywhere. Pressure on the surface of the LCD screen can cause splotches in the image. If you remove the pressure from the LCD screen, it will return to normal after a while.	—
There are small bright or dark points on the LCD screen.	● The LCD screen is manufactured using extremely precise technology, and over 99.99% of the pixels will be normal, but less than 0.01% will be either always off or always on.	—
Cannot format a Memory card.	● The protect seal may be placed on the Memory card. If the data on the Memory card has been backed up on a personal computer, remove the seal and format the card.	23
Colored bands appear at the top and bottom of the screen when displaying the sun or a bright light source.	● This is not a malfunction. There is no problem with the recorded images.	—

Error Messages (for the camera)

Error messages appear on the LCD screen.

Messages	Contents	Page
MEMORY FULL	The storage capacity of the Memory card has been reached. You can store additional photos either by replacing the memory card with a new one, or by deleting photos that are no longer needed.	22
SET DATE/TIME	The date has not yet been set. Set the date.	66
WRITE PROTECTION	The Memory card is write protected. Check the contents of the card, and then either replace this memory card with a new one, or remove the protect sticker.	22
NO VALID IMAGE	This message is displayed if the Power dial is set to "▶", when there are no pictures stored in the Memory card.	—
NO MEMORY CARD	This message is displayed if no Memory card has been inserted. Insert a Memory card. Otherwise, there are dust, finger prints, etc. on the contact surface on the Memory card. Clean the surface with a soft cloth.	22
FORMAT MEMORY CARD	This message is displayed if a Memory card that is not yet formatted has been inserted. Format the memory card.	23
NOW EDITING	This message is displayed when editing processing is in progress.	55
NOW RECORDING	This message is displayed when picture data is being saved to a Memory card.	30
NOW DELETING	This message is displayed when picture data is being deleted.	53
PROTECTED	This message is displayed when an attempt is made to delete the picture that is currently being displayed, and which is protected.	52
NOW FORMATTING	This message is displayed while a Memory card is being formatted.	23

Error Messages (for the printer)

Error messages appear on the LCD screen. For details, refer to the printer's instruction manual.

Messages	Contents
CHECK INK CASSETTE	No ink cassette is loaded.
REPLACE INK CASSETTE	The ink cassette is used up.
INK ERROR CHECK INK CASSETTE	This message is displayed when an ink-related error has occurred.
PRINT ERROR HAS OCCURRED PRINTING ABORTED	This message is displayed when an error has occurred and the sheet that was being printed is ejected.
NO PAPER	This message is displayed when there is no paper in the paper tray.
PLEASE WAIT	This message is displayed until operation is cancelled, when the temperature rises or cancellation is requested.
PRINTER IS NOT CONNECTED	This message is displayed when an attempt is made to print while no printer is connected.
PICTURE WITH NO FRAME IS SELECTED SELECT PICTURE WITH FRAME	This message is displayed when “no frame” has been selected but the paper that is loaded does not permit the “no frame” specification.
TRANSMISSION ERROR	Communications error occurred between the camera and the printer.
SET PAPER TRAY	The paper tray has not been inserted.
REPLACE BATTERY	The battery is low on power.
PRINTER: SYSTEM ERROR	This message is displayed when printing cannot be performed.

Power source	: DC 5 V ⎓
Power consumption	: 4.0 W (when the LCD screen is off) 5.6 W (when the LCD screen is on)
Dimensions	: 101 (W) mm x 67 (H) mm x 59 (D) mm (except protruding parts)
Weight	: Approx. 290 g (without a Memory card and battery)
Operating temperature	: 0°C to 40°C
Relative humidity	: 35% to 80%
Storage temperature	: –20°C to 50°C
LCD screen	: 2.0 inch, polysilicon TFT (200,000 pixels)
Storage media	: SmartMedia™ 3.3V (up to 64MB)
CCD	: 3.34 million pixels (3.24 million valid pixels), 1/1.8" square pixels, primary color filter, interlace scan CCD
Focal distance	: 7.5 mm to 17.5 mm (equivalent to 37mm to 86 mm on a 35 mm still camera)
Lens	: 2.3X optical zoom lens
Video	: 160 pixels x 120 pixels, 20 seconds, JVC original format
Recording format	: Exif Ver. 2.1 (DCF compliant), TIFF (Uncompressed), DPOF-compatible
Sensitivity	: 80/160/320 (ISO compliant)
Iris value (F value)	: F2.8/3.8, 5.6, 8, 11
Exposure control	: Program AE, iris priority AE
Exposure compensation	: +/–2EV (0.5EV steps)
Minimum subject distance	: Approx. 2 cm to 50 cm (in Macro mode)
Light measurement system	: Multi, spot
Flash	: Built-in, Auto/red-eye prevention/forced/disabled
Recommended distance for flash	: Approx. 2.5 m
Shutter speed	: Auto (Program AE: 1/8 seconds – 1/750 seconds, Iris priority AE: 1/4 seconds – 1/750 seconds)
White balance	: Auto/Manual (☀, ⛅, 🌫, MWB, 🌙)
Focus	: Auto/Manual

Self timer	: 1 second, 8 seconds
Photo quality	: 3 modes (STANDARD/FINE/NO COMP.)
Number of storable photos (with an 8MB Memory card, STANDARD/FINE/NO COMP.)	: 2032 x 1536: approx. 10/8/0 1024 x 768: approx. 43/32/3 640 x 480: approx. 87/65/8
Battery	: Lithium ion battery
Printer connector	: Output for optional printer
VIDEO output connector	: Two-pole plug, 3.5 mm diameter (PAL)
Digital output connector	: Mini-USB connector

AC Power Adapter/Charger AA-V37

Power requirement	
U.S.A. and Canada	: AC 120 V~, 60 Hz
Other countries	: AC 110 V – 240 V~, 50 Hz/60 Hz
Power consumption	: 23 W
Output	
Charge	: DC 3.6 V ⎓, 0.77 A
Camera	: DC 5.0 V ⎓, 1.5 A
Operating temperature	: 0°C to 40°C [when charging: 10°C to 35°C]
Dimensions	: 68 (W) mm x 38 (H) mm x 110 (D) mm
Weight	: Approx. 230 g (without a DC cord)

E. & O. E. Design and specifications subject to change without notice.

AC Power Adapter (Optional)

1. To prevent fire, electric shock or injury...

.... **DO NOT** use the AC power adapter with any power source or voltage not supported.

.... **DO NOT** modify or disassemble the AC power adapter. Never attempt to repair or check it yourself, as this is very dangerous. Consult your nearest JVC dealer for maintenance on the AC power adapter.

.... **DO NOT** connect any power cord other than the one provided to the AC power adapter. If the power cord's performance or design is different, fire or electric shock may result.

.... first connect the power cord to the AC power adapter. If the power cord is connected first to an AC outlet, and the AC power adapter's connector comes in contact with a metallic object, a short-circuit will occur which may result in fire or injury.

2. To prevent fire, malfunction or electric shock...

.... **DO NOT** use any AC power adapter except the one specified with this digital still camera. If the AC adapter's performance or design is different than what the digital camera is designed for, fire, malfunction or electric shocks may result. Before using, thoroughly read the instructions of the digital still camera and the AC power adapter.

3. To avoid malfunction...

.... connect the power cord to the AC power adapter securely. If the power cord is disconnected during use of the camera, shooting or playback may become impossible and the image data may become corrupt.

Main Unit

1. For safety, DO NOT . . .

.... open the camera's chassis.

.... disassemble or modify the unit.

.... allow inflammables, water or metallic objects to enter the unit.

.... remove the batteries or disconnect the power supply while the power is on.

2. Avoid using the unit . . .

.... in places subject to excessive humidity or dust.

.... in places subject to soot or steam such as near a cooking stove.

.... in places subject to excessive shock or vibration.

.... near a television set.

.... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).

.... in places subject to extremely high (over 40°C) or extremely low (under 0°C) temperatures.

3. DO NOT leave the unit . . .

.... in places of over 50°C.

.... in places where humidity is extremely low. (below 35%) or extremely high (above 80%).

.... in direct sunlight.

.... in a closed car in summer.

.... near a heater.

4. To protect the unit, DO NOT . . .

.... allow it to become wet.

.... drop the unit or strike it against hard objects.

.... subject it to shock or excessive vibration during transportation.

.... keep the lens directed at extremely bright objects for long periods.

.... carry it by holding the lens. Be sure to hold the main unit with both hands.

.... swing it excessively when using the hand strap.

Built-in Rechargeable Battery

To store the date/time in memory, a rechargeable battery is integrated in the camera. As long as the camera is connected to an AC outlet using the AC power adapter, or the batteries installed in the camera continue to supply power to the camera, the built-in battery is always charged. However, if the camera is not used for approx. 3 months, the built-in battery will become discharged and the date/time stored in memory will be lost. When this occurs, connect the camera to an AC outlet using the AC power adapter for over 24 hours to charge the built-in rechargeable battery. Before using the camera again, set the date/time.
Note that it is possible to use the camera without setting the date/time.

LCD Monitor

1. **To prevent damage to the LCD monitor, DO NOT . . .**
   .... push it strongly or apply any shocks.
   .... place the camcorder with the LCD monitor on the bottom.
2. **To prolong service life . . .**
   .... avoid rubbing it with coarse cloth.
3. **Be aware of the following phenomena for LCD monitor use. These are not malfunctions . . .**

- While using the camera, the surface around the LCD monitor and/or the back of the LCD monitor may heat up.
- If you leave power on for a long time, the surface around the LCD monitor becomes hot.

How To Handle A CD-ROM

- Take care not to soil or scratch the mirror surface (opposite to the printed surface). Do not write anything or put a sticker on either the front or back surface. If the CD-ROM gets dirty, gently wipe it with a soft cloth outward from the centre hole using a circular motion.
- Do not use conventional disc cleaners or cleaning spray.
- Do not bend the CD-ROM or touch its mirror surface.
- Do not store your CD-ROM in a dusty, hot or humid environment. Keep it away from direct sunlight.

About moisture condensation . . .

- You may have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass' outer surface. This same phenomenon occurs on the lens of the camera when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

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